

5. List of References

- Aarts JMMJG, Denison MS, Cox MA, et al. 1995. Species-specific antagonism of Ah receptor action by 2,2',5,5'-tetrachloro- and 2,2',3,3',4,4'-hexachlorobiphenyl. *Eur J Pharmacol* 293:463-474.
- *Abadin HG, Hibbs BF, Pohl HR. 1997. Breast-feeding exposure of infants to cadmium, lead, and mercury: A public health viewpoint. *Toxicol Ind Health* 13(4):495-517.
- Abbott BD, Birnbaum LS. 1989. Cellular alterations and enhanced induction of cleft palate after coadministration of retinoic acid and TCDD. *Toxicol Appl Pharmacol* 99:287-301.
- *Abbott BD, Perdew GH, Birnbaum LS. 1994. Ah receptor in embryonic mouse palate and effects of TCDD on receptor expression. *Toxicol Appl Pharmacol* 126:16-25.
- Abbott BD, Schmid JE, Pitt JA, et al. 1999. Adverse reproductive outcomes in the transgenic Ah receptor-deficient mouse. *Toxicol Appl Pharmacol* 155:62-70.
- Abnet CC, Tanguay RL, Heideman W, et al. 1999. Transactivation activity of human, zebrafish, and rainbow trout aryl hydrocarbon receptors expressed in COS-7 cells: Greater insight into species differences in toxic potency of polychlorinated dibenzo-*p*-dioxin, dibenzofuran, and biphenyl congeners. *Toxicol Appl Pharmacol* 159:41-51.
- Adami H-O, Lipworth L, Titus-Ernstoff L, et al. 1995. Organochlorine compounds and estrogen-related cancers in women. *Cancer Causes Control* 6:551-566.
- Ahlborg UG, Lipworth L, Titus-Ernstoff L, et al. 1995. Organochlorine compounds in relation to breast cancer, endometrial cancer, and endometriosis: An assessment of the biological and epidemiological evidence. *Crit Rev Toxicol* 25(6):463-531.
- *Allen JR, Norback DH. 1976. Pathobiological responses of primates to polychlorinated biphenyl exposure. In: Proceedings of the National Conference on Polychlorinated Biphenyls, EPA 560/6-75-004, 43-49.
- Altmann L, Lilienthal H, Hany J, et al. 1997. Congener-specific effects of maternal PCB exposure on functional plasticity in cortical and hippocampal slices of rats. *Neurotoxicology* 18(3):906.
- Altmann L, Lilienthal H, Hany J, et al. 1998. Inhibition of long-term potentiation in developing rat visual cortex but not hippocampus by in utero exposure to polychlorinated biphenyls. *Dev Brain Res* 110:257-260.
- Andersen ME, Birnbaum LS, Barton HA, et al. 1997a. Regional hepatic CYP1A1 and CYP1A2 induction with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin evaluated with a multicompartment geometric model of hepatic zonation. *Toxicol Appl Pharmacol* 144:145-155.
- Andersen ME, Eklund CR, Mills JJ, et al. 1997b. A multicompartment geometric model of the liver in relation to regional induction of cytochrome P450s. *Toxicol Appl Pharmacol* 144:135-144.

*Cited in text

Anderson H, Falk C, Fiore B, et al. 1996. Consortium for the health assessment of Great Lakes sportfish consumption. *Toxicol Ind Health* 12(3-4):369-373.

Anderson HA, Falk C, Hanrahan L, et al. 1998. Profiles of Great Lakes critical pollutants: A sentinel analysis of human blood and urine. *Environ Health Perspect* 106(5):279-289.

Anderson LM, Beebe LE, Fox SD, et al. 1991. Promotion of mouse lung tumors by bioaccumulated polychlorinated aromatic hydrocarbons. *Exp Lung Res* 17:455-471.

*Andersson PL, Blom A, Johannisson A, et al. 1999. Assessment of PCBs and hydroxylated PCBs as potential xenoestrogens: *In vitro* studies based on MCF-7 cell proliferation and induction of vitellogenin in primary culture of rainbow trout hepatocytes. *Arch Environ Contam Toxicol* 37:145-150.

Andersson L, Nikolaidis E, Brunstrom B, et al. 1991. Effects of polychlorinated biphenyls with *Ah* receptor affinity on lymphoid development in the thymus and the bursa of Fabricius on chick embryos *in ovo* and in mouse thymus anlagen *in vitro*. *Toxicol Appl Pharmacol* 107:183-188.

*Andrews JE, Courtney KD, Stead AG, et al. 1989. Hexachlorobenzene-induced hyperthyroidism and osteosclerosis in rats. *Fundam Appl Toxicol* 12:242-251.

Angus WGR, Contreras ML. 1996. Effects of polychlorinated biphenyls on dopamine release from PC12 cells. *Toxicol Lett* 89:191-199.

*Angus WGR, Mousa MA, Vargas VM, et al. 1997. Inhibition of L-aromatic amino acid decarboxylase by polychlorinated biphenyls. *Neurotoxicology* 18:857-868.

*Arcaro KF, Yi L, Seegal RF, et al. 1999. 2,2',6,6'-Tetrachlorobiphenyl is estrogenic *in vitro* and *in vivo*. *J Cell Biochem* 72:94-102.

*Arnold DL, Bryce F, Karpinski K, et al. 1993b. Toxicological consequences of Aroclor 1254 ingestion by female Rhesus (*Macaca mulatta*) monkeys. Part 1B. Prebreeding phase: Clinical and analytical laboratory findings. *Food Chem Toxicol* 31(11):811-824.

*Arnold DL, Bryce F, McGuire PF, et al. 1995. Toxicological consequences of Aroclor 1254 ingestion by female Rhesus (*Macaca mulatta*) monkeys. Part 2. Reproduction and infant findings. *Food Chem Toxicol* 33:457-474.

*Arnold DL, Bryce F, Mes J, et al. 1999. Toxicological consequences of feeding PCB congeners to infant Rhesus (*Macaca mulatta*) and Cynomolgus (*Macaca fascicularis*) monkeys. *Food Chem Toxicol* 37:153-167.

Arnold DL, Bryce F, Miller D, et al. 1998a. The toxicological effects following the ingestion of chinook salmon from the Great Lakes by Sprague-Dawley rats during a two-generation feeding-reproduction study. *Regul Toxicol Pharmacol* 27:S18-S27.

*Arnold DL, Bryce F, Stapley R, et al. 1993a. Toxicological consequences of Aroclor 1254 ingestion by female Rhesus (*Macaca mulatta*) monkeys. Part 1A. Prebreeding phase: Clinical health findings. *Food Chem Toxicol* 31(11):799-810.

*Arnold DL, Nera EA, Stapley R, et al. 1996a. Prevalence of endometriosis in Rhesus (*Macaca mulatta*) monkeys ingesting PCB (Aroclor 1254): Review and evaluation. *Fundam Appl Toxicol* 31(1):42-55.

*Arnold DL, Nera EA, Stapley R, et al. 1997. Toxicological consequences of Aroclor 1254 ingestion by female rhesus (*Macaca mulatta*) monkeys and their nursing infants. Part 3: Post-reproduction and pathological findings. *Food Chem Toxicol* 35(12):1191-1207.

Arnold DL, Stapley R, Bryce F, et al. 1998b. A multigeneration study to ascertain the toxicological effects of Great Lakes salmon fed to rats: Study overview and design. *Reg Toxicol Pharmacol* 27:S1-S7.

Arnold SF, Klotz DM, Collins BM, et al. 1996b. Synergistic activation of estrogen receptor with combinations of environmental chemicals. *Science* 272:1489-1492.

Asplund L, Svensson B, Eriksson U, et al. 1994. Polychlorinated biphenyls, 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane (*p,p'*-DDT) and 1,1-dichloro-2,2-bis(p-chlorophenyl)-ethylene (*p,p'*-DDE) in human plasma related to fish consumption. *Arch Environ Health* 49:477-486.

*Astroff B, Safe S. 1990. 2,3,7,8-Tetrachlorodibenzo-p-dioxin as an antiestrogen: Effect on rat uterine peroxidase activity. *Biochem Pharmacol* 39:485-488.

*ATSDR. 1992. Public health assessment guidance manual. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

*ATSDR. 1996. Toxicological profile for hexachlorobenzene. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

*ATSDR. 1998. Toxicological profile for chlorinated dibenzo-p-dioxins: December 1998. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

*ATSDR. 1999a. Toxicological profile for DDT, DDE, DDD: August, 1999: Preliminary draft for Public Comment. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

*ATSDR. 1999b. Toxicological profile for mercury. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

*ATSDR. 2000. Toxicological profile for polychlorinated biphenyls. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

*ATSDR. 2001a. Draft guidance manual for the assessment of joint toxic action of chemical mixtures. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

ATSDR. 2001b. Draft guidance for the preparation of an interaction profile. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

*ATSDR 2001c. Interaction profile for persistent chemicals found in fish (chlorinated dibenzo-p-dioxins, hexachlorobenzene, *p,p'*-DDE, methylmercury, and polychlorinated biphenyls). Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry.

*Aulerich RJ, Ringer RK. 1977. Current status of PCB toxicity to mink, and effect on their reproduction. *Arch Environ Contam Toxicol* 6:279-292.

*Aulerich RJ, Bursian SJ, Breslin WJ, et al. 1985. Toxicological manifestations of 2,4,5, 2',4',5'-, 2,3,6,2',3',6'-, and 3,4,5,3',4',5'-hexachlorobiphenyl and Aroclor 1254 in mink. *J Toxicol Environ Health* 15:63-79.

*Aulerich RJ, Bursian SJ, Evans MG, et al. 1987. Toxicity of 3,4,5,3',4',5'-hexachlorobiphenyl to mink. *Arch Environ Contam Toxicol* 16:53-60.

*Backlin BM, Bergman A. 1995. Histopathology of postpartum placental sites in mink (*Mustela vison*) exposed to polychlorinated biphenyls or fractions thereof. *APMIS* 103(12):843-54.

Backlin BM, Gessbo A, Forsberg M, et al. 1998a. Expression of the insulin-like growth factor II gene in polychlorinated biphenyl exposed female mink (*Mustela vison*) and their fetuses. *Mol Pathol* 51(1):43-7.

*Backlin BM, Madej A, Forsberg M. 1997. Histology of ovaries and uteri and levels of plasma progesterone, oestradiol-17beta and oestrone sulphate during the implantation period in mated and gonadotrophin-releasing hormone-treated mink (*Mustela vison*) exposed to polychlorinated biphenyls. *J Appl Toxicol* 17(5):297-306.

*Backlin BM, Persson E, Jones CJ, et al. 1998b. Polychlorinated biphenyl (PCB) exposure produces placental vascular and trophoblastic lesions in the mink (*Mustela vison*): a light and electron microscopic study. *APMIS* 106(8):785-99.

Bae J, Stuenkel EL, Loch-Caruso R. 1999. Stimulation of oscillatory uterine contraction by the PCB mixture Aroclor 1242 may involve increased [Ca²⁺] through voltage-operated calcium channels. *Toxicol Appl Pharmacol* 155:261-272.

Bager Y, Hemming H, Flodstrom S, et al. 1995. Interaction of 3,4,5,3',4'-pentachlorobiphenyl and 2,4,5,2',4',5'-hexachlorobiphenyl in promotion of altered hepatic foci in rats. *Pharmacol Toxicol* 77:149-154.

*Bager Y, Kato Y, Kenne K, et al. 1997. The ability to alter the gap junction protein expression outside GST-P positive foci in liver of rats was associated to the tumour promotion potency of different polychlorinated biphenyls. *Chem Biol Interact* 103(3):199-212.

Balaguer P, Francois F, Comunale F, et al. 1999. Reporter cell lines to study the estrogenic effects of xenoestrogens. *Sci Total Environ* 233:47-56.

*Banerjee BD, Ray A, Pasha ST. 1996. A comparative evaluation of immunotoxicity of DDT and its metabolites in rats. *Indian J Exp Biol* 34:517-522.

- Bannister R, Safe S. 1987. Synergistic interactions of 2,3,7,8-TCDD and 2,2',4,4',5,5'-hexachlorobiphenyl in C57BL/6J and DBA/2J mice: Role of the Ah receptor. *Toxicology* 44:159-169.
- Bannister R, Biegel L, Davis D, et al. 1989. 6-Methyl-1,3,8-trichlorodibenzofuran (MCDF) as a 2,3,7,8-tetrachlorodibenzo-*p*-dioxin antagonist in C57BL/6 mice. *Toxicology* 54:139-150.
- *Bannister R, Davis D, Zacherewski T, et al. 1987. Aroclor 1254 as a 2,3,7,8-tetrachlorodibenzo-*p*-dioxin antagonist: Effects on enzyme induction and immunotoxicity. *Toxicology* 46:29-42.
- *Barnett JB, Barfield L, Walls R, et al. 1987. The effect of in utero exposure to hexachlorobenzene on the developing immune response of BALB/C mice. *Toxicol Lett* 39:263-274.
- *Barsotti DA, Marlar RJ, Allen JR. 1976. Reproductive dysfunction in Rhesus monkeys exposed to low levels of polychlorinated biphenyls (Aroclor 1248). *Food Cosmet Toxicol* 14:99-103.
- *Battershill JM. 1994. Review of the safety assessment of polychlorinated biphenyls (PCBs) with particular reference to reproductive toxicity. *Hum Exp Toxicol* 13:581-597.
- *Bemis JC, Seegal RF. 1999. Polychlorinated biphenyls and methylmercury act synergistically to reduce rat brain dopamine content *in vitro*. *Environ Health Perspect* 107:879-885.
- Benedetti L, MacCormack LS, Bunce NJ. 1994. Characterization of a phenobarbital-inducible Ah receptor-like protein in the Sprague-Dawley rat. *Arch Biochem Biophys* 309(1):1-9.
- Bentivegna CS, Ihnat MA, Baptiste NS, et al. 1998. Developmental regulation of the 3-methylcholanthrene- and dioxin-inducible *CYP1A5* gene in chick embryo liver *in vivo*. *Toxicol Appl Pharmacol* 151:166-173.
- *Bergman A, Athanasiadou M, Bergek S, et al. 1992. PCB and PCB methyl sulfones in mink treated with PCB and various PCB fractions. *Ambio* 21(8):570-576.
- Bergman A, Klasson-Wehler E, Kuroki H. 1994. Selective retention of hydroxylated PCB metabolites in blood. *Environ Health Perspect* 102:464-469.
- Berry DL, Slaga TJ, DiGiovanni J, et al. 1979. Studies with chlorinated dibenzo-*p*-dioxins, polybrominated biphenyls, and polychlorinated biphenyls in a two-stage system of mouse skin tumorigenesis: Potent anticarcinogenic effects. *Ann N Y Acad Sci* 320:405-414.
- Bestervelt LL, Pitt JA, Piper WN. 1998. Evidence for Ah receptor mediation of increased ACTH concentrations in primary cultures of rat anterior pituitary cells exposed to TCDD. *Toxicol Sci* 46:294-299.
- *Biegel L, Harris M, Davis D, et al. 1989b. 2,2',4,4',5,5'-Hexachlorobiphenyl as a 2,3,7,8-tetrachlorodibenzo-*p*-dioxin antagonist in C57BL/6J mice. *Toxicol Appl Pharmacol* 97:561-571.
- *Biegel L, Howie L, Safe S. 1989a. Polychlorinated biphenyl (PCB) congeners as 2,3,7,8-TCDD antagonists: Teratogenicity studies. *Chemosphere* 19(1-6):955-958.

Bignert A, Olsson M, Persson W, et al. 1998. Temporal trends of organochlorines in Northern Europe, 1967-1995. Relation to global fractionation, leakage from sediments and international measures. Environ Pollut 99:177-198.

Birnbaum LS. 1994. The mechanism of dioxin toxicity: Relationship to risk assessment. Environ Health Perspect Suppl 102(9):157-167.

Birnbaum LS. 1995a. Developmental effects of dioxins. Environ Health Perspect Suppl 103(Suppl. 7):89-94.

Birnbaum LS. 1995b. Developmental effects of dioxins and other endocrine disrupting chemicals. Neurotoxicology 16(4):748.

Birnbaum LS, Harris MW, Crawford DD, et al. 1987. Teratogenic effects of polychlorinated dibenzofurans in combination in C57BL/6N mice. Toxicol Appl Pharmacol 91:246-255.

*Birnbaum LS, Weber H, Harris MW, et al. 1985. Toxic interaction of specific polychlorinated biphenyls and 2,3,7,8-tetrachlorodibenzo-*p*-dioxin: Increased incidence of cleft palate in mice. Toxicol Appl Pharmacol 77:292-302.

Bishop JB, Witt KL, Sloane RA. 1997. Genetic toxicities of human teratogens. Mutat Res 396:9-43.

*Bitman J, Cecil HC. 1970. Estrogenic activity of DDT analogs and polychlorinated biphenyls. J Agric Food Chem 18:1108-1112.

*Bjerke DL, Sommer RJ, Moore RW, et al. 1994. Effects of *in utero* and lactational 2,3,7,8-tetrachlorodibenzo-*p*-dioxin exposure on responsiveness of the male rat reproductive system to testosterone stimulation in adulthood. Toxicol Appl Pharmacol 127:250-257.

Black DE, Gutijahr-Gobell R, Pruell RJ, et al. 1998. Effects of a mixture of non-*ortho*- and mono-*ortho*-polychlorinated biphenyls on reproduction in *Fundulus heteroclitus* (linnaeus). Environ Toxicol Chem 17(7):1396-1404.

Boll M, Weber LWD, Messner B, et al. 1998. Polychlorinated biphenyls affect the activities of gluconeogenic and lipogenic enzymes in rat liver: is there an interference with regulatory hormone actions? Xenobiotica 28(5):479-492.

Borgmann U, Whittle DM. 1991. Contaminant concentration trends in Lake Ontario lake trout (*Salvelinus namaycush*): 1977 to 1988. J Great Lakes Res 17(3):368-381.

*Boyages SC. 2000. The neuromuscular system and brain in hypothyroidism. In: Braverman LE, Utiger RD, eds. Werner & Ingbar's the thyroid: A fundamental and clinical text. Eighth edition. Philadelphia, PA: Lippincott Williams & Wilkins, 804-810.

*Brandt I, Bergman A. 1987. PCB methyl sulphones and related compounds: Identification of target cells and tissues in different species. Chemosphere 8/9:1671-1676.

Brent RL, Beckman DA, Landel CP. 1993. Clinical teratology. Curr Opin Pediatr 5:201-211.

*Brezner E, Terkel J, Perry AS. 1984. The effect of Aroclor 1254 (PCB) on the physiology of reproduction in the female rat-I. Comp Biochem Physiol 77:65-70.

Brouwer A, Ahlbord UG, van Leeuwen FXR, et al. 1998a. Report of the WHO working group on the assessment of health risks for human infants from exposure to PCDDs, PCDFs and PCBs. Chemosphere 37(9-12):1627-1643.

*Brouwer A, Morse DC, Lans MC, et al. 1998b. Interactions of persistent environmental organohalogens with the thyroid hormone system: Mechanisms and possible consequences for animal and human health. Toxicol Ind Health 14(1-2):59-84.

*Brown AP, Ganey PE. 1995. Neutrophil degranulation and superoxide production induced by polychlorinated biphenyls are calcium dependent. Toxicol Appl Pharmacol 13:198-205.

Brown AP, Olivero-Verbel J, Holdan WL, et al. 1998. Neutrophil activation by polychlorinated biphenyls: Structure-activity relationship. Toxicol Sci 46:308-316.

Brown MM, Schneider UA, Petrusis JR, et al. 1994. Additive binding of polychlorinated biphenyls and 2,3,7,8-tetrachlorodibenzo-*p*-dioxin to the murine hepatic Ah receptor. Toxicol Appl Pharmacol 129:243-251.

Brown NM, Manzolillo PA, Zhang J-X, et al. 1998. Prenatal TCDD and predisposition to mammary cancer in the rat. Carcinogenesis 19:1623-1629.

Brunstrom B, Andersson L, Nikolaidis E, et al. 1990. Non-*ortho*- and mono-*ortho*-chlorine-substituted polychlorinated biphenyls - embryotoxicity and inhibition of lymphoid development. Chemosphere 20(7-9):1125-1128.

Bucher JR, Lucier G. 1998. Current approaches toward chemical mixture studies at the National Institute of Environmental Health Sciences and the U.S. National Toxicology Program. Environ Health Perspect Suppl 106(6):1295-1298.

*Buck GM, Sever LE, Mendola P, et al. 1997. Consumption of contaminated sportfish from Lake Ontario and time-to-pregnancy. Am J Epidemiol 146(11):949-954.

Buff K, Brundl A. 1992. Specific binding of polychlorinated biphenyls to rat liver cytosol protein. Biochem Pharmacol 43(5):965-970.

*Burbacher TM, Mohamed MK, Mottett NK. 1988. Methylmercury effects on reproduction and offspring size at birth. Reprod Toxicol 1(4):267-278.

Bush B, Snow J, Connor S, et al. 1985a. Polychlorinated biphenyl congeners (PCBs), *p,p'*-DDE and hexachlorobenzene in human milk in three areas of upstate New York. Arch Environ Contam Toxicol 14:443-450.

Bush B, Snow J, Koblitz R. 1985b. Polychlorobiphenyl (PCB) congeners, *p,p'*-DDE, and hexachlorobenzene in maternal and fetal cord blood from mothers in Upstate New York. Arch Environ Contam Toxicol 13:517-527.

Bushnell PJ, Rice DC. 1999. Behavioral assessments of learning and attention in rats exposed perinatally to 3,3',4,4',5-pentachlorobiphenyl (PCB 126). *Neurotoxicol Teratol* 21(4):381-392.

*Byrne JJ, Carbone JP, Hanson EA. 1987. Hypothyroidism and abnormalities in the kinetics of thyroid hormone metabolism in rats treated chronically with polychlorinated biphenyl and polybrominated biphenyl. *Endocrinology* 121:520-527.

*Byrne JJ, Carbone JP, Pepe MG. 1988. Suppression of serum adrenal cortex hormones by chronic low-dose polychlorobiphenyl or polybromobiphenyl treatments. *Arch Environ Contam Toxicol* 17:47-53.

Cantoni C, Comi G. 1997. Changes in the concentrations of pesticide residues in foods and in human tissues between 1960 and 1996. *Outlook On Agriculture* 26(1):47-52.

Cantor D, Smoger G, Berger H, et al. 1996. *In-utero* and postnatal exposure to 2,3,7,8 TCDD in Times Beach, Missouri: Support for psychoneuroimmunologic axis. *Neurotoxicology* 17:946.

Capen CC. 1994. Mechanisms of chemical injury of thyroid gland. *Prog Clin Biol Res* 387:173-191.

Carpenter DO, Arcaro KF, Buch B, et al. 1998. Human health and chemical mixtures: An overview. *Environ Health Perspect Suppl* 106(6):1263-1270.

Carthew P, Smith AG. 1994. Pathological mechanisms of hepatic tumour formation in rats exposed chronically to dietary hexachlorobenzene. *J Appl Toxicol* 14(6):447-452.

Chan HM, Berti PR, Receveur O, et al. 1997. Evaluation of the population distribution of dietary contaminant exposure in an Arctic population using Monte Carlo statistics. *Environ Health Perspect* 105(3):316-321.

*Chauhan KR, Kodavanti PRS, McKinney JD. 2000. Assessing the role of *ortho*-substitution on polychlorinated biphenyl binding to transthyretin, a thyroxine transport protein. *Toxicol Appl Pharmacol* 162:10-21.

*Cheek AO, Kow K, Chen J, et al. 1999. Potential mechanisms of thyroid disruption in humans: Interaction of organochlorine compounds with thyroid receptor, transthyretin, and thyroid-binding globulin. *Environ Health Perspect* 107(4):273-278.

*Choksi NY, Kodavanti PRS, Tilson HA, et al. 1997. Effects of polychlorinated biphenyls (PCBs) on brain tyrosine hydroxylase activity and dopamine synthesis in rats. *Fundam Appl Toxicol* 39:76-80.

*Chu I, Poon R, Yagminas A, et al. 1998. Subchronic toxicity of PCB 105 (2,3,3',4,4'-pentachlorobiphenyl) in rats. *J Appl Toxicol* 18:285-292.

*Chu I, Velleneuve DC, Tagimnas A, et al. 1994. Subchronic toxicity of 3,3',4,4',5-pentachlorobiphenyl in the rat. *Fundam Appl Toxicol* 22:457-468.

Chu I, Villeneuve DC, Valli VE, et al. 1984. Toxicological response and its reversibility in rats fed Lake Ontario or Pacific coho salmon for 13 weeks. *J Environ Sci Health B* 19(8-9):713-731.

*Chu I, Villeneuve DC, Yagminas A, et al. 1995. Toxicity of PCB 77 (3,3',4,4'-tetrachlorobiphenyl) and PCB 118 (2,3',4,4',5-pentachlorobiphenyl) in the rat following subchronic dietary exposure. *Fundam Appl Toxicol* 26:282-292.

*Chu I, Villeneuve DC, Yagminas A, et al. 1996a. Toxicity of 2,2',4,4',5,5'-hexachlorobiphenyl in rats: Effects following a 90-day oral exposure. *J Appl Toxicol* 16(2):121-128.

*Chu I, Villeneuve DC, Yagminas A, et al. 1996b. Toxicity of 2,4,4'-trichlorobiphenyl in rats following 90-day dietary exposure. *J Toxicol Environ Health* 49(3):301-318.

Clemons JH, Myers CR, Lee LEJ, et al. 1998. Induction of cytochrome P4501A by binary mixtures of polychlorinated biphenyls (PCBs) and 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) in liver cell lines from rat and trout. *Aquat Toxicol* 43:179-194.

*Cogliano VJ. 1998. Assessing the cancer risk from environmental PCBs. *Environ Health Perspect* 106(6):317-323.

*Collins WT, Capen CC. 1980. Fine structural lesions and hormonal alterations in thyroid glands of perinatal rats exposed *in utero* and by the milk to polychlorinated biphenyls. *Am J Pathol* 99:125-142.

*Collins WT, Capen CC, Kasza L, et al. 1977. Effect of polychlorinated biphenyl (PCB) on the thyroid gland of rats: Ultrastructural and biochemical investigations. *Am J Pathol* 89:119-136.

*Connor K, Ramamoorthy K, Moore M, et al. 1997. Hydroxylated polychlorinated biphenyls (PCBs) as estrogens and antiestrogens: Structure-activity relationships. *Toxicol Appl Pharmacol* 145:111-123.

*Connor K, Safe S, Jefcoate CR, et al. 1995. Structure-dependent induction of CYP2B by polychlorinated biphenyl congeners in female Sprague-Dawley rats. *Biochem Pharmacol* 50(11):1913-1920.

*Cooke PS, Zhao Y-D, Hansen LG. 1996. Neonatal polychlorinated biphenyl treatment increases adult testis size and sperm production in the rat. *Toxicol Appl Pharmacol* 136:112-117.

*Corey DA, Juarez de Ku LM, Bingman VP, et al. 1996. Effects of exposure to polychlorinated biphenyl (PCB) from conception on growth, and development of endocrine, neurochemical, and cognitive measures in 60 day old rats. *Growth Dev Aging* 60:131-143.

*Courtney KD. 1979. Hexachlorobenzene (HCB): A review. *Environ Res* 20:225-266.

Courval JM, De Hoog JV, Stein AD, et al. 1997. Sport caught fish consumption and conception failure in Michigan anglers. Montreal, Quebec, Canada: Health Conference 1997 : Great Lakes and St. Lawrence.

*Courval JM, DeHoog JV, Stein AD, et al. 1999. Sport-caught fish consumption and conception delay in licensed Michigan anglers. *Environ Res (A)* 80:S183-S188.

Couture LA, Abbott BD, Birnbaum LS. 1990. A critical review of the developmental toxicity and teratogenicity of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin: Recent advances toward understanding the mechanism. *Teratology* 42:619-627.

- Craan A, Haines D. 1998. Twenty-five years of surveillance for contaminants in human breast milk. *Arch Environ Contam Toxicol* 35:702-710.
- Crane JL. 1996. Carcinogenic human health risks associated with consuming contaminated fish from five Great Lakes areas of concern. *J Great Lakes Res* 22(3):653-668.
- Crisp TM, Clegg ED, Cooper RL, et al. 1998. Environmental endocrine disruption: An effects assessment and analysis. *Environ Health Perspect Suppl* 106(1):11-56.
- Crofton KM, Rice DC. 1999. Low-frequency hearing loss following perinatal exposure to 3,3',4,4',5-pentachlorobiphenyl (PCB 126) in rats. *Neurotoxicol Teratol* 21(3):299-301.
- Czaja K, Ludwicki JK, Goralczyk K, et al. 1999. Effect of changes in excretion of persistent organochlorine compounds with human breast milk on related exposure of breast-fed infants. *Arch Environ Contam Toxicol* 36:498-503.
- *Daly HB. 1991. Reward reductions found more aversive by rats fed environmentally contaminated salmon. *Neurotoxicol Teratol* 13:449-453.
- Danse IR, Jaeger RJ, Kroger MK, et al. 1997. Position paper of the American Council on Science and Health: Public health concerns about environmental polychlorinated biphenyls (PCBs). *Ecotoxicol Environ Saf* 38:71-84.
- Danzo BJ. 1998. The effects of environmental hormones on reproduction. *Cell Mol Life Sci* 54:1249-1264.
- *Dar E, Kanarek MS, Anderson HA, et al. 1992. Fish consumption and reproductive outcomes in Green Bay, Wisconsin. *Environ Res* 59:189-201.
- Darerud PO, Tornwall U, Bergman A, et al. 1993. Liver accumulation of 2,3,7,8-tetrachloro-[³H]dibenzofuran in mice: modulation by treatments with polychlorinated biphenyls. *Chem Biol Interact* 89:89-102.
- *Darnerud PO, Morse D, Klasson-Wehler E, et al. 1996. Binding of a 3,3', 4,4'-tetrachlorobiphenyl (CB-77) metabolite to fetal transthyretin and effects on fetal thyroid hormone levels in mice. *Toxicology* 106(1-3):105-114.
- Daston GP, Gooch JW, Breslin WJ, et al. 1997. Environmental estrogens and reproductive health: A discussion of the human and environmental data. *Reprod Toxicol* 11(4):465-481.
- *Davis D, Safe S. 1989. Dose-response immunotoxicities of commercial polychlorinated biphenyls (PCBs) and their interaction with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. *Toxicol Lett* 48:35-43.
- *Davis D, Safe S. 1990. Immunosuppressive activities of polychlorinated biphenyls in C57BL/6N mice: Structure-activity relationships as Ah receptor agonists and partial antagonists. *Toxicology* 63:97-111.
- *DeCaprio AP, McMartin DM, O'Keefe PW, et al. 1986. Subchronic oral toxicity of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in the guinea pig: Comparisons with a PCB-containing transformer fluid pyrolysate. *Fundam Appl Toxicol* 6:454-463.

*de Haan LHJ, Halfwerk S, Hovens SEL, et al. 1995. Inhibition of intercellular communication and induction of ethoxyresorufin-*O*-deethylase activity by polychlorobiphenyls, dibenzo-*p*-dioxins and dibenzofurans in mouse hepa1c1c7 cells. Environ Toxicol Pharmacol 1(1):27-37.

*De Haan LHJ, Halfwerk S, Hovens SEL, et al. 1996. Inhibition of intercellular communication and induction of ethoxyresorufin-*O*-deethylase activity by polychlorobiphenyls, -dibenzo-*p*-dioxins and -dibenzofurans in mouse hepa1c1c7 cells. Environ Toxicol Pharmacol 1:27-37.

De Jongh J, Bouwman C, Nieboer R, et al. 1994. Toxicokinetic mixture interactions between 2,3,7,8-tetrachlorodibenzo-*p*-dioxin and 2,2',4,4',5,5'-hexachlorobiphenyl in the liver of neonatal rats after pre- and postnatal exposure. Chemosphere 28(9):1581-1588.

De Jongh J, Devito M, Dilberto J, et al. 1995a. The effects of 2,2',4,4',5,5'-hexachlorobiphenyl cotreatment on the disposition of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in mice. Toxicol Lett 80:131-137.

De Jongh J, Devito M, Nieboer R, et al. 1995b. Induction of cytochrome P450 isoenzymes after toxicokinetic interactions between 2,3,7,8-tetrachlorodibenzo-*p*-dioxin and 2,2',4,4',5,5'-hexachlorobiphenyl in the liver of the mouse. Fundam Appl Toxicol 25:264-270.

De Jongh J, Nieboer R, Schroders I, et al. 1993. Toxicokinetic mixture interactions between chlorinated aromatic hydrocarbons in the liver of the C57BL/6J mouse: 2. polychlorinated dibenzo-*p*-dioxins (PCDDs), dibenzofurans (PCDFs) and biphenyls (PCBs). Arch Toxicol 67:598-604.

De Jongh J, Wondergem F, Seinen W, et al. 1992. Absence of interactions on hepatic retention and 7-ethoxyresorfin-*O*-deethylation activity after co-administration of 1,2,3,7,8-pentachlorodibenzo-*p*-dioxin and 2,4,5,2',4',5'-hexachlorobiphenyl. Toxicology 75:21-28.

*DeKoning EP, Karmaus W. 2000. PCB exposure *in utero* and via breast milk. A review. J Expo Anal Environ Epidemiol 10:285-293.

De Krey GK, Kerkvliet NI. 1995. Suppression of cytotoxic T lymphocyte activity by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin occurs *in vivo*, but not *in vitro*, and is independent of corticosterone elevation. Toxicology 97:105-112.

DeLong GT, Rice CD. 1997. Tributyltin potentiates 3,3',4,4',5-pentachlorobiphenyl-induced cytochrome P-4501A-related activity. J Toxicol Environ Health 51:131-148.

*den Besten C, Bennik MH, Bruggeman I, et al. 1993. The role of oxidative metabolism in hexachlorobenzene-induced porphyria and thyroid hormone homeostasis: A comparison with pentachlorobenzene in a 13-week feeding study. Toxicol Appl Pharmacol 119:181-194.

den Besten C, Bennik MMH, Van Iersel M, et al. 1994. Comparison of the urinary metabolite profiles of hexachlorobenzene and pentachlorobenzene in the rat. Chem Biol Interact 90:121-137.

*Den Tonkelaar EM, Verschuur HG, Bankovska J, et al. 1978. Hexachlorobenzene toxicity in pigs. Toxicol Appl Pharmacol 43:137-145.

DeRosa CT, Johnson BL. 1996. Strategic elements of ATSDR's Great Lakes Human Health Effects Research Program. Toxicol Ind Health 12(3-4):315-325.

*Desaulniers D, Poon R, Phan W, et al. 1997. Reproductive and thyroid hormone levels in rats following 90-day dietary exposure to PCB 28 (2,4,4'-trichlorobiphenyl) or PCB 77 (3,3',4,4'-tetrachlorobiphenyl). *Toxicol Ind Health* 13(5):627-638.

de Solla SR, Bishop CA, Van Der Kraak G, et al. 1998. Impact of organochlorine contamination on levels of sex hormones and external morphology of common snapping turtles (*Chelydra serpentina serpentina*) in Ontario, Canada. *Environ Health Perspect* 106(5):253-260.

*De Vito MJ, Birnbaum LS. 1994. Toxicology of dioxins and related chemicals. In: Schecter A, ed. *Dioxins and health*. New York, NY: Plenum Press, 139-162.

DeVito MJ, Ross DG, Dupuy AE, et al. 1998. Dose-response relationships for disposition and hepatic sequestration of polyhalogenated dibenzo-*p*-dioxins, dibenzofurans, and biphenyls following subchronic treatment in mice. *Toxicol Sci* 46:223-234.

Dewailly E, Weber J-P, Gingras S, et al. 1991. Coplanar PCBs in human milk in the Province of Quebec, Canada: Are they more toxic than dioxin for breast fed infants? *Bull Environ Contam Toxicol* 47:491-498.

Dickman MD, Leung KMC. 1998. Mercury and organochlorine exposure from fish consumption in Hong Kong. *Chemosphere* 37(5):991-1015.

Digiovanni J, Berry DL, Gleason GL, et al. 1980. Time-dependent inhibition by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin of skin tumorigenesis with polycyclic hydrocarbons. *Cancer Res* 40:1580-1587.

Diliberto JJ, Burgin DE, Birnbaum LS. 1999. Effects of CYP1A2 on disposition of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin, 2,3,4,7,8-pentachlorodibenzofuran, and 2,2',4,4',5,5'-hexachlorobiphenyl in CYP1A2 knockout and parental (C57BL/6N and 129/Sv) strains of mice. *Toxicol Appl Pharmacol* 159:52-64.

*Durkin P. 1995. Development of mixtures assessment methods: Guidelines for application of the binary weight-of-evidence methodology. Submitted to The Kevric Company, Inc., Silver Spring, MD. SERA TR 95-018-001a.

Elliott JE, Norstrom RJ, Smith GEJ. 1996. Patterns, trends, and toxicological significance of chlorinated hydrocarbon and mercury contaminants in bald eagle eggs from the Pacific coast of Canada, 1990-1994. *Arch Environ Contam Toxicol* 31:354-367.

*EPA. 1988. Recommendations for and documentation of biological values for use in risk assessment. Cincinnati, OH: U.S. Environmental Protection Agency. PB88-179874.

*EPA. 1996. PCBs: Cancer dose-response assessment and application to environmental mixtures. Washington, DC: U.S. Environmental Protection Agency, Office of Research and Development, National Center for Environmental Assessment. EPA/600/P-96/001F.

*EPA. 1997a. Addition of dioxin and dioxin-like compounds: Modification of polychlorinated biphenyls (PCBs) listing; toxic chemical release reporting; community right-to-know. *Federal Register* 62:24887.

*EPA. 1997b. Health effects assessment summary tables: FY 1997 update. Washington, DC: U.S. Environmental Protection Agency, Office of Research and Development, Office of Emergency and Remedial Response. NTIS PB97-921199.

Eriksson P, Frederiksson A. 1996. Developmental neurotoxicity of four *ortho*-substituted polychlorinated biphenyls in the neonatal mouse. *Environ Toxicol Pharmacol* 1:155-165.

Eriksson P, Fredriksson A. 1998. Neurotoxic effects in adult mice neonatally exposed to 3,3',4,4',5-pentachlorobiphenyl or 2,3,3',4,4'-pentachlorobiphenyl. Changes in brain nicotinic receptors and behaviour. *Environ Toxicol Pharmacol* 5:17-27.

*Eriksson P, Nordberg A. 1986. The effects of DDT, DDOH-palmitic acid, and a chlorinated paraffin on muscarinic receptors and the sodium-dependent choline uptake in the central nervous system of immature mice. *Toxicol Appl Pharmacol* 85:121-127.

*Eriksson P, Ahlbom J, Frederiksson A. 1992. Exposure to DDT during a defined period in neonatal life induces permanent changes in brain muscarinic receptors and behaviour in adult mice. *Brain Res* 582:277-281.

*Eriksson P, Nilsson-Hakansson L, Nordberg A, et al. 1990. Neonatal exposure to DDT and its fatty acid conjugate: Effects on cholinergic and behavioural variables in the adult mouse. *Neurotoxicology* 11:345-354.

Esser C, Welzel M. 1993. Ontogenetic development of murine fetal thymocytes is accelerated by 3,3',4,4'-tetrachlorobiphenyl. *Int J Immunopharmacol* 15(8):841-852.

*Expert Panel. 1994. Interpretive review of the potential adverse effects of chlorinated organic chemicals on human health and the environment: Chapter 5: Polychlorinated biphenyls. *Regul Toxicol Pharmacol* 20(1):S187-S307.

Fan F, Rozman KK. 1995. Short- and long-term biochemical effects of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in female Long-Evans rats. *Toxicol Lett* 75:209-216.

*Feeley MM, Jordan SA. 1998. Dietary and tissue residue analysis and contaminant intake estimations in rats consuming diets composed of Great lakes salmon: A multigeneration study. *Regul Toxicol Pharmacol* 27:S8-S17.

*Feeley MM, Jordan SA, Gilman AP. 1998. The Health Canada Great Lakes Multigeneration Study-summary and regulatory considerations. *Regul Toxicol Pharmacol* 27:S90-S98.

*Fein GG, Jacobson JL, Jacobson SW, et al. 1984. Prenatal exposure to polychlorinated biphenyls: Effects on birth size and gestational age. *J Pediatr* 105(2):315-320.

Feron VJ, Cassee FR, Groten JP. 1998. Toxicology of chemical mixtures: International perspective. *Environ Health Perspect Suppl* 106(6):1281-1289.

*Fischer LJ, Seegal RF, Ganey PE, et al. 1998. Symposium overview: Toxicity of non-coplanar PCBs. *Toxicol Sci* 41:49-61.

Fischer LJ, Wagner MA, Madhukar BV. 1999. Potential involvement of calcium, CaM kinase II, and MAP kinases in PCB-stimulated insulin release from RINm5F cells. *Toxicol Appl Pharmacol* 159:194-203.

*Fitzhugh O. 1948. Use of DDT insecticides on food products. *Ind Eng Chem* 40:704-705.

Foster WG. 1995. The reproductive toxicology of Great Lakes contaminants. *Environ Health Perspect Suppl* 103(9):63-69.

Foster WG. 1998. Endocrine disruptors and development of the reproductive system in the fetus and children: Is there a cause for concern? *Can J Public Health* 89(Suppl 1):S37-S41.

*Franklin MR, Phillips JD, Kushner JP. 1997. Cytochrome P450 induction, uroporphyrinogen decarboxylase depression, porphyrin accumulation and excretion, and gender influence in a 3-week rat model of porphyria cutanea tarda. *Toxicol Appl Pharmacol* 147:289-299.

Freeman HC, Sangalang GB. 1977. A study of the effects of methyl mercury, cadmium, arsenic, selenium, and a PCB, (Aroclor 1254) on adrenal and testicular steroidogenesis *in vitro*, by the gray seal *Halichoerus grypus*. *Arch Environ Contam Toxicol* 5:369-383.

Fujita ETM, Sawa Y. 1980. Combined effects of polychlorinated biphenyls and methylmercury on hepatic microsomal monooxygenases and the hepatotoxic action of bromobenzene. *J Pharmacobiodyn* 3:463-469.

*Gabriels J, Al-Zubaidy T, Askari E. 1975. DDT and immunological responses. *Arch Environ Health* 30:81-84.

*Ganey PE, Sirosis JE, Denison M, et al. 1993. Neutrophil function after exposure to polychlorinated biphenyls *in vitro*. *Environ Health Perspect* 101:430-434.

*Gao X, Son D-S, Terranova PF, et al. 1999. Toxic equivalency factors of polychlorinated dibenzo-*p*-dioxins in an ovulation model: Validation of the toxic equivalency concept for one aspect of endocrine disruption. *Toxicol Appl Pharmacol* 157:107-116.

*Gao X, Terranova PF, Rozman KK. 2000. Effects of polychlorinated dibenzofurans, biphenyls, and their mixture with dibenzo-*p*-dioxins on ovulation in the gonadotropin-primed immature rat: Support for the toxic equivalency concept. *Toxicol Appl Pharmacol* 163:115-124.

Gasiewicz TA. 1996. Receptor-mediated toxicity: Possible linkages to neuroimmunological disorders. *Neurotoxicology* 17(3-4):945.

*Gierthy JF, Acaro KF, Floyd M. 1997. Assessment of PCB estrogenicity in a human breast cancer cell line. *Chemosphere* 34(5-7):1495-1505.

Giesy JP, Kannan K. 1998. Dioxin-like and non-dioxin-like toxic effects of polychlorinated biphenyls (PCBs): Implications for risk assessment. *Crit Rev Toxicol* 28(6):511-569.

*Gladen BC, Rogan WJ. 1991. Effects of perinatal polychlorinated biphenyls and dichlorobiphenyl dichloroethene on later development. *J Pediatr* 119:58-63.

*Gladen BC, Rogan WJ, Hardy P, et al. 1988. Development after exposure to polychlorinated biphenyls and dichlorobiphenyl dichloroethene transplacentally and through human milk. *J Pediatr* 113:991-995.

Gladen BC, Schecter AJ, Papke O, et al. 1999. Polychlorinated dibenzo-*p*-dioxins, polychlorinated dibenzofurans, and coplanar polychlorinated biphenyls in breast milk from two cities in Ukraine. *J Toxicol Environ Health* 58:119-127.

GLWQB. 1985. Report to the International Joint Commission: Report on Great Lakes water quality. Kingston, Ontario: Great Lakes Water Quality Board.

Goerz G, Vizethum W, Bolsen K, et al. 1978. [Hexachlorobenzene (HCB) induced porphyria in rats. Influence of HCB-metabolites on the biosynthesis of heme.] *Arch Dermatol Res* 263:189-196. (German)

*Goldey ES, Crofton KM. 1998. Thyroxine replacement attenuates hypothyroxinemia, hearing loss, and motor deficits following developmental exposure to Aroclor 1254 in rats. *Toxicol Sci* 45:94-105.

*Goldey ES, Kehn LS, Lau C, et al. 1995. Development exposure to polychlorinated biphenyls (Aroclor 1254) reduces circulating thyroid hormone concentrations and causes hearing deficits in rats. *Toxicol Appl Pharmacol* 135:77-88.

Goldstein JA, Friesen M, Linder RE, et al. 1977. Effects of pentachlorophenol on hepatic drug-metabolizing enzymes and porphyria related to contamination with chlorinated dibenzo-*p*-dioxins and dibenzofurans. *Biochem Pharmacol* 26:1549-1557.

Goldstein JA, Friesen M, Scotti TM, et al. 1978. Assessment of the contribution of chlorinated dibenzo-*p*-dioxins and dibenzofurans to hexachlorobenzene-induced toxicity, porphyria, changes in mixed function oxygenases, and histopathological changes. *Toxicol Appl Pharmacol* 46:633-649.

Goldstein JA, Hickman P, Jue DL. 1974. Experimental hepatic porphyria induced by polychlorinated biphenyls. *Toxicol Appl Pharmacol* 27:437-448.

Goldstein JA, Linko P, Hahn ME, et al. 1986. Structure-activity relationships of chlorinated benzenes as inducers of hepatic cytochrome P-450 isozymes in the rat. In: Morris CR, Cabral JRP, ed. Hexachlorobenzene: Proceedings of an international symposium. Lyon, France: International Agency for Research on Cancer, 519-526.

Gopalaswamy UV, Nair CKK. 1992. DNA binding and mutagenicity of lindane and its metabolites. *Bull Environ Contam Toxicol* 49:300-305.

*Gralla EJ, Fleischman YK, Luthra YK, et al. 1977. Toxic effects of hexachlorobenzene after daily administration to beagle dogs for one year. *Toxicol Appl Pharmacol* 40:227-239.

*Grandjean P, Weihe P, Needham LL, et al. 1995a. Relation of a seafood diet to mercury, selenium, arsenic, and polychlorinated biphenyl and other organochlorine concentrations in human milk. *Environ Res* 71:29-38.

*Grandjean P, Weihe P, White RF. 1995b. Milestone development in infants exposed to methylmercury from human milk. *Neurotoxicology* 16:27-34.

*Grandjean P, Weihe P, White RF, et al. 1997. Cognitive deficit in 7-year-old children with prenatal exposure to methylmercury. *Neurotoxicol Teratol* 19:417-428.

*Grandjean P, Weihe P, White RF, et al. 1998. Cognitive performance of children prenatally exposed to "safe" levels of methylmercury. *Environ Res* 77:165-172.

Gray LE. 1998. Xenoendocrine disrupters: Laboratory studies on male reproductive effects. *Toxicol Lett* 102-103:331-335.

Gray LE, Kelce WR. 1996. Latent effects of pesticides and toxic substances on sexual differentiation of rodents. *Toxicol Ind Health* 12(3/4):515-531.

Gray LE, Ostby J. 1998. Effects of pesticides and toxic substances on behavioral and morphological reproductive development: Endocrine versus nonendocrine mechanisms. *Toxicol Ind Health* 14:159-183.

*Gray LE, Kelce WR, Monosson E, et al. 1995. Exposure to TCDD during development permanently alters reproductive function in male Long Evans rats and hamsters: Reduced ejaculated and epididymal sperm numbers and sex accessory gland weights in offspring with normal androgenic status. *Toxicol Appl Pharmacol* 131:108-118.

Gray LE, Ostby JS, Kelce WR. 1994. Developmental effects of an environmental antiandrogen: The fungicide vinclozolin alters sex differentiation of the male rat. *Toxicol Appl Pharmacol* 129:46-52.

*Gray LE, Ostby JS, Kelce WR. 1997. A dose-response analysis of the reproductive effects of a single gestational dose of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in male Long Evans hooded rat offspring. *Toxicol Appl Pharmacol* 146:11-20.

*Gray LE Jr, Ostby J, Marshall R, et al. 1993. Reproductive and thyroid effects of low-level polychlorinated biphenyl (Aroclor 1254) exposure. *Fundam Appl Toxicol* 20(3):288-294.

Gray LE, Ostby J, Wolf C, et al. 1998. The value of mechanistic studies in laboratory animals for the prediction of reproductive effects in wildlife: Endocrine effects on mammalian sexual differentiation. *Environ Toxicol Chem* 17(1):109-118.

Gray LE, Wolf C, Lambright C, et al. 1999. Administration of potentially antiandrogenic pesticides (procymidone, linuron, iprodione, chlozolinate, *p,p'*-DDE, and ketoconazole) and toxic substances (dibutyl- and diethylhexyl phthalate, PCB 169, and ethane dimethane sulphonate) during sexual differentiation produces diverse profiles of reproductive malformation in the male rat. *Toxicol Ind Health* 15:94-118.

Grimalt JO, Sunyer J, Moreno V, et al. 1994. Risk excess of soft-tissue sarcoma and thyroid cancer in a community exposed to airborne organochlorinated compound mixtures with a high hexachlorobenzene content. *Int J Cancer* 56:200-203.

Grimvall E, Rylander L, Nilsson-Ehle P, et al. 1997. Monitoring of polychlorinated biphenyls in human blood plasma: Methodological developments and influence of age, lactation, and fish consumption. *Arch Environ Contam Toxicol* 32:329-336.

- Guttes S, Failing K, Neumann K, et al. 1998. Chlororganic pesticides and polychlorinated biphenyls in breast tissue of women with benign and malignant breast disease. *Arch Environ Contam Toxicol* 35:140-147.
- Gyorkos J, Denomme MA, Leece B, et al. 1985. Reconstituted halogenated hydrocarbon pesticide and pollutant mixtures found in human tissues: effects on the immature male Wistar rat after short-term exposure. *Can J Physiol Pharmacol* 63:36-43.
- Haag-Gronlund M, Johansson N, Fransson-Sten R, et al. 1998. Interactive effects of three structurally different polychlorinated biphenyls in a rat liver tumor promotion bioassay. *Toxicol Appl Pharmacol* 152:153-165.
- *Haake JM, Safe S, Mayura K, et al. 1987. Aroclor 1254 as an antagonist of the teratogenicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin. *Toxicol Lett* 38:299-306.
- Haghdoost NR, Newman LM, Johnson EM. 1997. Multiple chemical exposures: Synergism vs. individual exposure levels. *Reprod Toxicol* 11(1):9-27.
- *Hahn ME, Goldstein JA, Linko P, et al. 1989. Interaction of hexachlorobenzene with the receptor for 2,3,7,8-tetrachlorodibenzo-p-dioxin *in vitro* and *in vivo*. *Arch Biochem Biophys* 270(1):344-355.
- *Hansen H, De Rosa CT, Pohl H, et al. 1998. Public health challenges posed by chemical mixtures. *Environ Health Perspect* 106(Suppl. 6):1271-1280.
- *Hansen LG. 1998. Stepping backward to improve assessment of PCB congener toxicities. *Environ Health Perspect Suppl* 106(1):171-189.
- *Hansen LG, Li MH, Saeed A, et al. 1995. Environmental polychlorinated biphenyls: Acute toxicity of landfill soil extract to female prepubertal rats. *Arch Environ Contam Toxicol* 29:334-343.
- Hany J, Lilienthal H, Roth-Harer A, et al. 1999a. Behavioral effects following single and combined maternal exposure to PCB 77 (3,4,3',4'-tetrachlorobiphenyl) and PCB 47 (2,4,2',4'-tetrachlorobiphenyl) in rats. *Neurotoxicol Teratol* 21(2):147-156.
- *Hany J, Lilienthal H, Sarasin A, et al. 1999b. Developmental exposure of rats to a reconstituted PCB mixture or Aroclor 1254: Effects on organ weights, aromatase activity, sex hormone levels, and sweet preference behavior. *Toxicol Appl Pharmacol* 158:231-243.
- Hany J, Lilienthal H, Weinand-Harer A, et al. 1997. Behavioral consequences of in utero exposure to single and combined PCB-congeners in rats. *Neurotoxicology* 18:905.
- Haraguchi K, Kato Y, Kimura R, et al. 1998. Hydroxylation and methylthiolation of mono-ortho-substituted polychlorinated biphenyls in rats: Identification of metabolites with tissue affinity. *Chem Res Toxicol* 11:1508-1515.
- Haraguchi K, Kato Y, Kimura R, et al. 1999. Tissue distribution of methylsulfonyl metabolites derived from 2,2',4,5,5'-penta- and 2,2',3,4',5',6-hexachlorobiphenyls in rats. *Arch Environ Contam Toxicol* 37:135-142.

Hardell L, Van Bavel B, Lindstrom G, et al. 1996. Higher concentrations of specific polychlorinated biphenyl congeners in adipose tissue from non-Hodgkin's lymphoma patients compared with controls without a malignant disease. *Int J Oncol* 9:603-608.

*Harper N, Connor K, Safe S. 1993a. Immunotoxic potencies of polychlorinated biphenyl (PCB), dibenzofuran (PCDF) and dibenzo-*p*-dioxin (PCDD) congeners in C57BL/6 and DBA/2 mice. *Toxicology* 80:217-227.

Harper N, Connor K, Steinberg M, et al. 1995. Immunosuppressive activity of polychlorinated biphenyl mixtures and congeners: Nonadditive (antagonistic) interactions. *Fundam Appl Toxicol* 27:131-139.

*Harper N, Howie L, Conner K, et al. 1993b. Immunosuppressive effects of highly chlorinated biphenyls and diphenyl ethers on T-cell dependent and independent antigens in mice. *Toxicology* 85:123-135.

Harper N, Howie L, Connor K, et al. 1993c. Immunosuppressive and monooxygenase induction activities of highly chlorinated diphenyl ether congeners in C57BL/6 and DBA/2 mice. *Fundam Appl Toxicol* 20:496-502.

Harris M, Zacharewski T, Astroff B, et al. 1989. Characterization of 6-methyl-1,3,8-trichlorobenzofuran (MCDF) as a 2,3,7,8-TCDD antagonist in male rats: Induction of monooxygenases. *Chemosphere* 19:769-772.

Harris M, Zacharewski T, Safe S. 1993. Comparative potencies of Aroclors 1232, 1242, 1248, 1254, and 1260 in male Wistar rats-assessment of the toxic equivalency factor (TEF) approach for polychlorinated biphenyls (PCBs). *Fundam Appl Toxicol* 20:456-463.

*Hayes WJ, Durham WF, Cueto C, et al. 1956. The effect of known repeated oral doses of chlorophenoethane (DDT) in man. *J Am Med Assoc* 162(9):890-897.

*Hemming H, Bager Y, Flodstrom S, et al. 1995. Liver tumour promoting activity of 3,4,5,3',4'-pentachlorobiphenyl and its interaction with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. *Eur J Pharmacol* 292:241-249.

*Hemming H, Flodstrom S, Warngard L, et al. 1993. Relative tumour promoting activity of three polychlorinated biphenyls in rat liver. *Eur J Pharmacol* 248(2):163-174.

*Hertzler DR. 1990. Neurotoxic behavioral effects of Lake Ontario salmon diets in rats. *Neurotoxicol Teratol* 12:139-143.

Hicks HE, De Rosa CT, Cibulas W. 1998. U.S. Agency for Toxic Substances and Disease Registry: Great Lakes Human Health Effects Research Program. *J Clean Technol Environ Toxicol Occup Med* 7(4):375-396.

*Hirano M, Mitsumori K, Maita K, et al. 1986. Further carcinogenicity study on methylmercury chloride in ICR mice. *Jap J Vet Sci* 48(1)127-135.

*Hong R, Taylor K, Abonour R. 1989. Immune abnormalities associated with chronic TCDD exposure in rhesus. *Chemosphere* 18:1785-1797.

Hong SJ, Grover CA, Safe SH, et al. 1998. Halogenated aromatic hydrocarbons suppress CA1 field excitatory postsynaptic potentials in rat hippocampal slices. *Toxicol Appl Pharmacol* 148:7-13.

*Hood A, Hashmi R, Klaassen CD. 1999. Effects of microsomal enzyme inducers on thyroid-follicular cell proliferation, hyperplasia, and hypertrophy. *Toxicol Appl Pharmacol* 160:163-170.

*Hooper K, McDonald TA. 2000. The PBDEs: An emerging environmental challenge and another reason for breast-milk monitoring programs. *Environ Health Perspect* 108(5):387-392.

*Hori M, Kondo H, Ariyoshi N, et al. 1997. Changes in the hepatic glutathione peroxidase redox system produced by coplanar polychlorinated biphenyls in Ah-responsive and -less-responsive strains of mice: mechanism and implications for toxicity. *Environ Toxicol Pharmacol* 3:267-275.

Huisman M, Eerenstein SEJ, Koopman-Esseboom C, et al. 1995c. Perinatal exposure to polychlorinated biphenyls and dioxins through dietary intake. *Chemosphere* 31:4273-4287.

*Huisman M, Koopman-Esseboom C, Fidler V, et al. 1995a. Perinatal exposure to polychlorinated biphenyls and dioxins and its effect on neonatal neurological development. *Early Hum Dev* 41:111-127.

*Huisman M, Koopman-Esseboom C, Lanting CI, et al. 1995b. Neurological condition in 18-month-old children perinatally exposed to polychlorinated biphenyls and dioxins. *Early Hum Dev* 43:165-176.

*Hultman P, Enestrom S. 1992. Dose-response studies in murine mercury-induced autoimmunity and immune-complex disease. *Toxicol Appl Pharmacol* 113:199-208.

*Hultman P, Johansson U, Turley SJ, et al. 1994. Adverse immunological effects and autoimmunity induced by dental amalgam and alloy in mice. *FASEB J* 8:1183-1190.

Hutz RJ. 1999. Reproductive endocrine disruption by environmental xenobiotics that modulate the estrogen-signaling pathway, particularly tetrachlorodibenzo-*p*-dioxin (TCDD). *J Reprod Develop* 45(1):1-12.

*IARC. 1987. IARC Monographs on the evaluation of carcinogenic risks to humans. Overall evaluations of carcinogenicity: An updating of IARC monographs volumes 1 to 47. Supplement 7. Lyon, France: International Agency for Research on Cancer, 322-326.

*IARC. 1997. Polychlorinated dibenzo-*para*-dioxins. Lyon, France: International Agency for Research on Cancer. <http://193.51.164.11/htdocs/monographs/vol69/dioxin.html>.

Iatropoulos MJ, Felt R, Coulston F, et al. 1977. Histopathology of low chlorinated biphenyls and hexachlorobenzene in female Rhesus monkeys. *Toxicol Appl Pharmacol* 41(1):173.

*Ilback N-G. 1991. Effects of methyl mercury exposure on spleen and blood natural killer (NK) cell activity in the mouse. *Toxicology* 67:117-124.

*Ilback N-G, Sundberg J, Oskarsson A. 1991. Methyl mercury exposure via placenta and milk impairs natural killer (NK) cell function in newborn rats. *Toxicol Lett* 58:149-158.

*IRIS. 2001a. *p,p'*-Dichlorodiphenyl dichloroethane (DDD). Integrated Risk Information System (IRIS). <http://www.epa.gov/iris/subst/0374.htm>

*IRIS. 2001b. *p,p'*-Dichlorodiphenyldichloroethylene (DDE). Integrated Risk Information System (IRIS). <http://www.epa.gov/iris/subst/0328.htm>

*IRIS. 2001c. *p,p'*-Dichlorodiphenyl trichloroethane (DDT). Integrated Risk Information System (IRIS). <http://www.epa.gov/iris/subst/0147.htm>

*IRIS. 2001d. Hexachlorobenzene. Integrated Risk Information System (IRIS). <http://www.epa.gov/iris/subst/0374.htm>

*IRIS. 2001e. Methylmercury (MeHg). Integrated Risk Information System (IRIS). <http://www.epa.gov/iris/subst/0073.htm>

*IRIS. 2001f. Polychlorinated biphenyls. Integrated Risk Information System (IRIS). <http://www.epa.gov/iris/subst/0294.htm>

Iverson F, Mehta R, Hierlihy L, et al. 1998. Microsomal enzyme activity, glutathione s-transferase-placental form expression, cell proliferation, and vitamin A stores in livers of rats consuming Great Lakes salmon. *Regul Toxicol Pharmacol* 27:S76-S89.

*Jacobson JL, Jacobson SW. 1996. Intellectual impairment in children exposed to polychlorinated biphenyls in utero. *N Engl J Med* 335(11):783-789.

*Jacobson JL, Jacobson SW, Humphrey HEB. 1990a. Effects of in utero exposure to polychlorinated biphenyls and related contaminants on cognitive functioning in young children. *J Pediatr* 116(1):38-45.

*Jacobson JL, Jacobson SW, Humphrey HEB. 1990b. Effects of exposure to PCBs and related compounds on growth and activity in children. *Neurotoxicol Teratol* 12:319-326.

*Jacobson JL, Jacobson SW, Schwartz PM, et al. 1984. Prenatal exposure to an environmental toxin: A test of the multiple effects model. *Dev Psychol* 20(4):523-532.

*Jacobson SW, Fein GG, Jacobson JL, et al. 1985. The effect of intrauterine PCB exposure on visual recognition memory. *Child Dev* 56:853-860.

*Jansen HT, Cooke PS, Porcelli J, et al. 1993. Estrogenic and antiestrogenic actions of PCBs in the female rat: In vitro and in vivo studies. *Reprod Toxicol* 7:237-248.

Janz DM, Metcalfe CD. 1991. Nonadditive interactions of mixtures of 2,3,7,8-TCDD and 3,3',4,4'-tetrachlorobiphenyl on aryl hydrocarbon hydroxylase induction in rainbow trout (*Oncorhynchus mykiss*). *Chemosphere* 23(4):467-472.

Johansson M, Larsson C, Bergman A, et al. 1998. Structure-activity relationship for inhibition of CYP11B1-dependent glucocorticoid synthesis in Y1 cells by aryl methyl sulfones. *Pharmacol Toxicol* (Amsterdam) 83:225-230.

Johnson BL, De Rosa CT. 1999. Public health implications. *Environ Res* 80:S246-S248.

Johnson BL, Hicks HE, Jones DE, et al. 1998. Public health implications of persistent toxic substances in the Great Lakes and St. Lawrence Basins. *J Great Lakes Res* 24(2):698-722.

Johnson KL, Cummings AM, Birnbaum LS. 1997. Promotion of endometriosis in mice by polychlorinated dibenzo-*p*-dioxins, dibenzofurans, and biphenyls. *Environ Health Perspect* 105(7):750-755.

*Jones CJ, Backlin BM, Stoddart RW, et al. 1997. Environmental pollutants as aetiological agents in female reproductive pathology: Placental glycan expression in normal and polychlorinated biphenyl (PCB)-exposed mink (*Mustela vison*). *Placenta* 18(8):689-699.

Jordan SA, Feeley MM. 1999. PCB congener patterns in rats consuming diets containing Great Lakes salmon: Analysis of fish, diets, and adipose tissue. *Environ Res A* 80:S207-S212.

*Juarez de Ku LM, Sharma-Stokkermans M, Meserve LA. 1994. Thyroxine normalizes polychlorinated biphenyl (PCB) dose-related depression of choline acetyltransferase (ChAT) activity in hippocampus and basal forebrain of 15-day-old rats. *Toxicology* 94:19-30.

*Kasza L, Collins WT, Capen CC, et al. 1978. Comparative toxicity of polychlorinated biphenyl and polybrominated biphenyl in the rat thyroid gland: Light and electron microscopic alterations after subacute dietary exposure. *J Environ Pathol Toxicol* 1:587-599.

Kavlock RJ, Perreault SD. 1994. Multiple chemical exposure and risks of adverse reproductive function and outcome. In: Yang RSH, ed. *Toxicology of chemical mixtures: Case studies, mechanisms, and novel approaches*. San Diego, CA: Academic Press, 245-297.

*Kelce WR, Lambright CR, Gray LE, et al. 1997. Vinclozolin and *p,p'*-DDE alter androgen-dependent gene expression: *In vivo* confirmation of an androgen receptor-mediated mechanism. *Toxicol Appl Pharmacol* 142:192-200.

*Kelce WR, Stone CR, Laws SC, et al. 1995. Persistent DDT metabolite *p,p'*-DDE is a potent androgen receptor antagonist. *Nature* 375:581-585.

*Kerkvliet NI. 1994. Immunotoxicology of dioxins and related chemicals. In: Schechter A, ed. *Dioxins and health*. New York, NY: Plenum Press, 199-225.

*Kihlstrom JE, Olsson M, Jensen SJ, et al. 1992. Effects of PCB and different fractions of PCB on the reproduction of the mink (*Mustela vison*). *Ambio* 21(8):563-569.

Kim Y, Cooper KR. 1998. Interactions of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) and 3,3',4,4',5-pentachlorobiphenyl (PCB 126) for producing lethal and sublethal effects in the Japanese medaka embryos and larvae. *Chemosphere* 36(2):409-418.

Kimbrough RD. 1997. Studies in children: Polychlorinated biphenyls, dibenzo-*p*-dioxins and dibenzofurans. *Health Environ Dig* 10(7):61-63.

Kiyohara C, Hirohata T, Masuda Y. 1995. Effects of polychlorinated dibenzo-*p*-dioxin and dibenzofuran congeners in human lymphoblastoid cells on aryl hydrocarbon hydroxylase activity. *Chemosphere* 31(7):3673-3680.

Klinge CM, Bowers JL, Kulakosky PC, et al. 1999. The aryl hydrocarbon receptor (AHR)/AHR nuclear translocator (ARNT) heterodimer interacts with naturally occurring estrogen response elements. *Mol Cell Endocrinol* 157:105-119.

*Kociba RJ, Keyes DG, Beyer JE, et al. 1978. Results of a two-year chronic toxicity and oncogenicity study of 2,3,7,8-tetrachlorodibenzo-p-dioxin in rats. *Toxicol Appl Pharmacol* 46:279-303.

*Kodavanti PRS, Tilson HA. 1997. Structure-activity relationships of potentially neurotoxic PCB congeners in the rat. *Neurotoxicology* 18(2):425-442.

Kodavanti PRS, Ward TR. 1998. Interactive effects of environmentally relevant polychlorinated biphenyls and dioxins on [³H]phorbol ester binding in rat cerebellar granule cells. *Environ Health Perspect* 106(8):479-486.

*Kodavanti PRS, Shin D-S, Tilson HA, et al. 1993. Comparative effects of two polychlorinated biphenyl congeners on calcium homeostasis in rat cerebellar granule cells. *Toxicol Appl Pharmacol* 123:97-106.

*Kodavanti PRS, Ward TR, Derr-Yellin EC, et al. 1998. Congener-specific distribution of polychlorinated biphenyls in brain regions, blood, liver, and fat of adult rats following repeated exposure to Aroclor 1254. *Toxicol Appl Pharmacol* 153:199-210.

*Kodavanti PRS, Ward TR, McKinney JD, et al. 1995. Increased [³H]phorbol ester binding in rat cerebellar granule cells by polychlorinated biphenyl mixtures and congeners: Structure-activity relationships. *Toxicol Appl Pharmacol* 130:140-148.

*Kodavanti PRS, Ward TR, McKinney JD, et al. 1996a. Increased [³H]phorbol ester binding in rat cerebellar granule cells and inhibition of ⁴⁵Ca²⁺ sequestration in rat cerebellum by polychlorinated diphenyl ether congeners and analogs: Structure-activity relationships. *Toxicol Appl Pharmacol* 138:251-261.

Kodavanti PRS, Ward TR, McKinney JD, et al. 1996b. Inhibition of microsomal and mitochondrial Ca²⁺-sequestration in rat cerebellum by polychlorinated biphenyl mixtures and congeners: Structure-activity relationships. *Arch Toxicol* 70:150-157.

Koga N, Kikuichi N, Kanamaru T, et al. 1998. Metabolism of 2,3',4',5-tetrachlorobiphenyl by cytochrome P450 from rats, guinea pigs and hamsters. *Chemosphere* 37(9-12):1895-1904.

*Kohn MC, Sewall CH, Lucier GW, et al. 1996. A mechanistic model of effects of dioxin on thyroid hormones in the rat. *Toxicol Appl Pharmacol* 165:29-48.

*Koopman-Esseboom C, Huisman M, Weisglas-Kuperus N, et al. 1994b. Dioxin and PCB levels in blood and human milk in relation to living areas in the Netherlands. *Chemosphere* 29(9-11):2327-2338.

*Koopman-Esseboom C, Morse DC, Weisglas-Kuperus N, et al. 1994a. Effects of dioxins and polychlorinated biphenyls on thyroid hormone status of pregnant women and their infants. *Pediatr Res* 36(4):468-473.

*Koopman-Esseboom C, Weisglas-Kuperus N, de Ridder MAJ, et al. 1996. Effects of polychlorinated biphenyl/dioxin exposure and feeding type on infants' mental and psychomotor development. *Pediatrics* 97(5):700-706.

*Korach KS, Sarver P, Chae K, et al. 1988. Estrogen receptor-binding activity of polychlorinated hydroxybiphenyls: Conformationally restricted structural probes. *Mol Pharmacol* 33:120-126.

Kortenkamp A, Altenburger R. 1999. Approaches to assessing combination effects of oestrogenic environmental pollutants. *Sci Total Environ* 233:131-140.

*Kostyniak PJ, Stinson C, Greizerstein HB, et al. 1999. Relation of Lake Ontario fish consumption, lifetime lactation, and parity to breast milk polychlorobiphenyl and pesticide concentrations. *Environ Res* A80:S166-S174.

*Kramer VJ, Helferich WG, Bergman A, et al. 1997. Hydroxylated polychlorinated biphenyl metabolites are anti-estrogenic in a stably transfected human breast adenocarcinoma (MCF7) cell line. *Toxicol Appl Pharmacol* 144:363-374.

Kremer J, Gleichmann E, Esser C. 1994. Thymic stroma exposed to arylhydrocarbon receptor-binding xenobiotics fails to support proliferation of early thymocytes but induced differentiation. *J Immunol* 153:2778-2786.

*Krishnan V, Safe S. 1993. Polychlorinated biphenyls (PCBs), dibenzo-p-dioxins (PCDDs), and dibenzofurans (PCDFs) as antiestrogens in MCF-7 human breast cancer cells: Quantitative structure-activity relationships. *Toxicol Appl Pharmacol* 120(1):55-61.

Lackmann GM, Angerer J, Salzberger U, et al. 1999. Influence of maternal age and duration of pregnancy on serum concentrations of polychlorinated biphenyls and hexachlorobenzene in full-term neonates. *Biol Neonate* 76:214-219.

Lans MC, Klasson-Wehler E, Willemsen M, et al. 1993. Structure-dependent, competitive interaction of hydroxy-polychlobiphenyls, -dibenzo-p-dioxins and -dibenzofurans with human transthyretin. *Chem Biol Interact* 88:7-21.

Lans MC, Spiertz C, Brouwer A, et al. 1994. Different competition of thyroxine binding to transthyretin and thyroxine-binding globulin by hydroxy-PCBs, PCDDs and PCDFs. *Eur J Pharmacol* 270:129-136.

Lanting CI, Fidler V, Huisman M, et al. 1998c. Determinants of polychlorinated biphenyls levels in plasma from 42-month-old children. *Arch Environ Contam Toxicol* 35:135-139.

*Lanting CI, Patandin S, Fidler V, et al. 1998a. Neurological condition in 42-month-old children in relation to pre- and postnatal exposure to polychlorinated biphenyls and dioxins. *Early Hum Dev* 50:283-292.

*Lanting CI, Patandin S, Weisglas-Kuperus N, et al. 1998b. Breastfeeding and neurological outcome at 42 months. *Acta Paediatr* 87:1224-1229.

*Larsen BR, Turrio-Baldassarri L, Nilsson T, et al. 1994. Toxic PCB congeners and organochlorine pesticides in Italian human milk. *Ecotoxicol Environ Saf* 28:1-13.

*Laug E, Nelson A, Gitzhugh O, et al. 1950. Liver cell alternation and DDT storage in the fat of the rat induced by dietary levels of 1 to 50 ppm DDT. *J Pharmacol Exp Ther* 98:268.

*Lecavalier PR, Chu I, Villeneuve D, et al. 1994. Combined effects of mercury and hexachlorobenzene in the rat. *J Environ Sci Health B* 29(5):951-961.

Leece B, Denomme MA, Towner R, et al. 1987. Nonadditive interactive effects of polychlorinated biphenyl congeners in rats: role of the 2,3,7,8-tetrachlorodibenzo-*p*-dioxin receptor. *Can J Physiol Pharmacol* 65:1908-1912.

*Leonzio C, Fossi MC, Casini S. 1996b. Porphyrins as biomarkers of methylmercury and PCB exposure in experimental quail. *Bull Environ Contam Toxicol* 56:244-250.

*Leonzio C, Monaci F, Fossi MC, et al. 1996a. Multiresponse biomarker evaluation of interactions between methylmercury and Arochlor 1260 in quail. *Ecotoxicology* 5:365-376.

*Li M-H, Hansen LG. 1996b. Enzyme induction and acute endocrine effects in prepubertal female rats receiving environmental PCB/PCDF/PCDD mixtures. *Environ Health Perspect* 104(7):712-722.

*Li M-H, Hansen LG. 1996a. Responses of prepubertal female rats to environmental PCBs with high and low dioxin equivalencies. *Fundam Appl Toxicol* 33:282-293.

*Li M-H, Hansen LG. 1997. Consideration of enzyme and endocrine interactions in the risk assessment of PCBs. *Rev Toxicol* 1:71-156.

*Li M-H, Rhine C, Hansen LG. 1998. Hepatic enzyme induction and acute endocrine effects of 2,3,3',4',6'-pentachlorobiphenyl in prepubertal female rats. *Arch Environ Contam Toxicol* 35:97-103.

*Li SMA, Denomme MA, Leece B, et al. 1989. Hexachlorobenzene: Biochemical effects and synergistic toxic interactions with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. *Toxicol Environ Chem* 22:215-227.

Li W, Wu WZ, Schramm KW, et al. 1999. Toxicity of mixtures of polychlorinated dibenzo-*p*-dioxins, dibenzofurans, and biphenyls determined by dose-response curve analysis. *Bull Environ Contam Toxicol* 62:539-546.

*Li X, Rozman KK. 1995. Subchronic effects of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) and their reversibility in male Sprague-Dawley rats. *Toxicology* 97:133-140.

Liljegren G, Hardell L, Lindstrom G, et al. 1998. Case-control study on breast cancer and adipose tissue concentrations of congener specific polychlorinated biphenyls, DDE and hexachlorobenzene. *Eur J Cancer Prev* 7:135-140.

*Linder RE, Gaines TB, Kimbrough RD. 1974. The effect of polychlorinated biphenyls on rat reproduction. *Food Cosmet Toxicol* 12:63-77.

*Linko P, Yeowell HN, Gasiewicz TA, et al. 1986. Induction of cytochrome P-450 isozymes by hexachlorobenzene in rats and aromatic hydrocarbon (Ah)-responsive mice. *J Biochem Toxicol* 1(2):95-107.

*Loeffler IK, Peterson RE. 1999. Interactive effects of TCDD and *p,p'*-DDE on male reproductive tract development in *in utero* and lactationally exposed rats. *Toxicol Appl Pharmacol* 154:28-39.

*Longcope C. 2000. The male and female reproductive systems in hypothyroidism. In: Braverman LE, Utiger RD, eds. Werner & Ingbar's the thyroid: A fundamental and clinical text. Eighth edition. Philadelphia, PA: Lippincott Williams & Wilkins, 824-827.

Longnecker MP, Rogan WJ, Lucier G. 1997. The human health effects of DDT (dichlorodiphenyltrichloroethane) and PCBs (polychlorinated biphenyls) and an overview of organochlorines in public health. *Ann Rev Public Health* 18:211-244.

*Lonky E, Reihman J, Darvill T, et al. 1996. Neonatal behavioral assessment scale performance in humans influenced by maternal consumption of environmentally contaminated Lake Ontario fish. *J Great Lakes Res* 22(2):198-212.

Loose LD, Silkworth JB, Coulston F. 1977. Impaired host-defense in mice fed Aroclor 1242 or hexachlorobenzene for six weeks. *Toxicol Appl Pharmacol* 41(1):203.

Loose LD, Silkworth JB, Pittman KA, et al. 1978. Impaired host resistance to endotoxin and malaria in polychlorinated biphenyl- and hexachlorobenzene-treated mice. *Infect Immun* 20:30-35.

Lorenzen A, Kennedy SW, Bastien LJ, et al. 1997. Halogenated aromatic hydrocarbon-mediated porphyrin accumulation and induction of cytochrome P4501A in chicken embryo hepatocytes. *Biochem Pharmacol* 53:373-384.

*Lundberg C. 1974. Effect of DDT on Cytochrome P-450 and oestrogen-dependent functions in mice. *Environ Physiol Biochem* 4:200-204.

Lundholm CE. 1991. Influence of chlorinated hydrocarbons, Hg²⁺ and methyl-Hg⁺ on steroid hormone receptors from eggshell gland mucosa of domestic fowls and ducks. *Arch Toxicol* 65:220-227.

Lundholm CE, Bartonek M. 1991. A study of the effects of *p,p'*-DDE and other related chlorinated hydrocarbons on inhibition of platelet aggregation. *Arch Toxicol* 65:570-574.

Lundholm CE, Bartonek M. 1992. Effects of *p,p'*-DDE and some other chlorinated hydrocarbons on the formation of prostaglandins by the avian eggshell gland mucosa. *Arch Toxicol* 66:387-391.

*Lundkvist U. 1990. Clinical and reproductive effects of Clophen A50 (PCB) administered during gestation on pregnant guinea pigs and their offspring. *Toxicology* 6:249-257.

Luster MI, Hong LH, Osborne R, et al. 1986. 1-Amino-3,7,8-trichlorodibenzo-p-dioxin: A specific antagonist for TCDD-induced myelotoxicity. *Biochem Biophys Res Commun* 139(2):747-756.

Lutter C, Iyengar V, Barnes R, et al. 1998. Breast milk contamination in Kazakhstan: implications for infant feeding. *Chemosphere* 37(9-12):1761-1772.

MacLuskey NJ, Brown TJ, Schantz S, et al. 1998. Hormonal interactions in the effects of halogenated aromatic hydrocarbons on the developing brain. *Toxicol Ind Health* 14(1-2):185-208.

Maczka C, Pang S, Policansky D, et al. 2000. Evaluating impacts of hormonally active agents in the environment. Environ Sci Technol 34(5):136A-141A.

Maier WE, Kodavanti PRS, Harry GJ, et al. 1994. Sensitivity of adenosine triphosphatases in different brain regions to polychlorinated biphenyl congeners. J Appl Toxicol 14(3):225-229.

*Mariussen E, Anderson JM, Fonnum F. 1999. The effect of polychlorinated biphenyls on the uptake of dopamine and other neurotransmitters into rat brain synaptic vesicles. Toxicol Appl Pharmacol 161:274-282.

*Marty MS, Atchison WD. 1997. Pathways mediating Ca^{2+} entry in rat cerebellar granule cells following *in vitro* exposure to methyl mercury. Toxicol Appl Pharmacol 147:319-330.

*Mayes BA, McConnell EE, Neal BH, et al. 1998. Comparative carcinogenicity in Sprague-Dawley rats of the polychlorinated biphenyl mixtures Aroclors 1016, 1242, 1254, and 1260. Toxicol Sci 41(1):62-76.

McKinley MK, Kedderis LB, Birnbaum LS. 1993. The effect of pretreatment on the biliary excretion of 2,3,7,8-tetrachlorodibenzo-*p*-dioxin, 2,3,7,8-tetrachlorodibenzofuran, and 3,3',4,4'-tetrachlorobiphenyl in the rat. Fundam Appl Toxicol 21:425-432.

McKinney J, Fannin R, Jordan S, et al. 1987. Polychlorinated biphenyls and related compound interactions with specific binding sites for thyroxine in rat liver nuclear extracts. J Med Chem 30:79-86.

*Mendola P, Buck GM, Sever LE, et al. 1997. Consumption of PCB-contaminated freshwater fish and shortened menstrual cycle length. Am J Epidemiol 146(11):955-960.

*Mendola P, Buck GM, Vena JE, et al. 1995. Consumption of PCB-contaminated sportfish and risk of spontaneous fetal death. Environ Health Perspect 103(5):498-502.

Mendoza CE, Shields JB. 1976. Effects of hexachlorobenzene on malathion LD50 and on cholinesterase and carboxylesterase activities in organs of the suckling albino rat. Toxicol Appl Pharmacol 35:447-453.

*Mergler D, Belanger S, Larribe F, et al. 1998. Preliminary evidence of neurotoxicity associated with eating fish from the upper St. Lawrence River Lakes. Neurotoxicology 19(4-5):691-702.

Mes J, Davies DJ, Doucet J, et al. 1993. Levels of chlorinated hydrocarbon residues in Canadian human breast milk and their relationship to some characteristics of the donors. Food Addit Contam 10(4):429-441.

Minnema DJ, Cooper GP, Greenland RD. 1989. Effects of methylmercury on neurotransmitter release from rat brain synaptosomes. Toxicol Appl Pharmacol 99:510-521.

*Mitsumori K, Hirano M, Ueda H, et al. 1990. Chronic toxicity and carcinogenicity of methylmercury chloride in B6C3F1 mice. Fundam Appl Toxicol 14:179-190.

*Mohamed M, Burbacher T, Mottett N. 1987. Effects of methyl mercury on testicular functions in *Macaca fascicularis* monkeys. Pharmacol Toxicol 60(1):29-36.

*Moore M, Mustain M, Daniel K, et al. 1997. Antiestrogenic activity of hydroxylated polychlorinated biphenyl congeners identified in human serum. *Toxicol Appl Pharmacol* 142:160-168.

Moore RW, Rudy TA, Bergman A, et al. 1996. 2,3,3',4,4'-Pentachlorobiphenyl (PCB 105)-induced hypothyroxinemia in rats. *Toxicologist* 30(1 part 2):227.

*Morrissey RE, Harris MW, Diliberto JJ, et al. 1992. Limited PCB antagonism of TCDD-induced malformations in mice. *Toxicol Lett* 60:19-25.

*Morse DC, Wehler EK, Wesseling W, et al. 1996. Alterations in rat brain thyroid hormone status following pre- and postnatal exposure to polychlorinated biphenyls (Aroclor 1254). *Toxicol Appl Pharmacol* 136:269-279.

Mosser JL, Teng T-C, Walther WG, et al. 1974. Interactions of PCBs, DDT and DDE in a marine diatom. *Bull Environ Contam Toxicol* 12(6):665-668.

Mumtaz M, Colman J. 1992. The risk assessment of chemical mixtures: Fine tuning the hazard index. In: Dodd DE, Clewell HJ, Mattie DR eds. *Proceedings of the 1992 conference on toxicology: Applications of advances in toxicology to risk assessment*. Wright-Patterson Air Force Base, Ohio: Armstrong Laboratory.

Mumtaz MM, Durkin PR. 1992. A weight-of-evidence approach for assessing interactions in chemical mixtures. *Toxicol Ind Health* 8: 377-406.

Mumtaz MM, De Rosa CT, Durkin PR. 1994. Approaches and challenges in risk assessments of chemical mixtures. In: Yang RSH, ed. *Toxicology of chemical mixtures: Case studies, mechanisms and novel approaches*. New York, NY: Academic Press, 565-597.

Mumtaz MM, Poirier KA, Colman JT. 1997. Risk assessment for chemical mixtures: Fine-tuning the hazard index approach. *J Clean Technol Environ Occup Med* 6(2):189-204.

Nagayama J, Okamura K, Iida T, et al. 1998. Postnatal exposure to chlorinated dioxins and related chemicals on thyroid hormone status in Japanese breast fed infants. *Chemosphere* 37(9-12):1789-1793.

Nagayama J Okamura K, Iida T, et al. 1998b. Perinatal exposure to chlorinated dioxins and related chemicals on thyroid hormone status in Japanese breast-fed infants. *Organohalogen Compounds* 37:313-316.

Nagayama J, Okamura K, Nakagawa R, et al. 1998a. Perinatal exposure to organochlorine pesticides on thyroid hormone status in Japanese breast-fed infants. *Organohalogen Compounds* 37:235-239.

Nagayama J, Tsuji H, Iida T, et al. 1986c. Perinatal exposure to chlorinated dioxins and related chemicals on lymphocyte subpopulations in Japanese breast-fed infants. *Organohalogen Compounds* 37:151-155.

Nagayama J, Tsuji H, Nakagawa R, et al. 1998d. Perinatal exposure to organochlorine pesticides on lymphocyte subpopulations in Japanese breast-fed infants. *Organohalogen Compounds* 37:157-161.

Nagayama J, Tsuji H, Okamura K, et al. 1998e. Perinatal exposure to polychlorinated biphenyls on lymphocyte subpopulations and thyroid hormone status in Japanese breast-fed infants. *Organohalogen Compounds* 37:163-167.

*NCI. 1978. Bioassays of DDT, TDE, and *p,p'*-DDE for possible carcinogenicity. Bethesda, MD: Carcinogenesis Testing Program, National Cancer Institute. Publication No. 78-1386.

Nelson BK. 1994. Interactions in developmental toxicology: A literature review and terminology proposal. *Teratology* 49:33-71.

*Nesaretnam K, Darbre P. 1997. 3,5,3',5'-Tetrachlorobiphenyl is a weak oestrogen agonist *in vitro* and *in vivo*. *J Steroid Biochem Mol Biol* 62(5/6):409-418.

*Nesaretnam K, Corcoran D, Dils RR, et al. 1996. 3,4,3',4'-Tetrachlorobiphenyl acts as an estrogen *in vitro* and *in vivo*. *Mol Endocrinol* 923-936.

*Ness DK, Schantz SL, Mostagian J, et al. 1993. Perinatal exposure to two polychlorinated biphenyl congeners: Histological effects on the thyroid gland. *Toxicologist* 13(1):358.

*Newsome WH, Davies D, Doucet J. 1995. PCB and organochlorine pesticides in Canadian human milk-1992. *Chemosphere* 30(11):2143-2153.

Niemi WD, Audi J, Bush B, et al. 1998. PCBs reduce long-term potentiation in the CA1 region of rat hippocampus. *Exp Neurol* 151:26-34.

*NTP. 1982. Carcinogenesis bioassay of 2,3,7,8-tetrachlorodibenzo-p-dioxin (CAS no. 1746-01-6) in Osborne-Mendel rats and B6C3F1 mice (gavage study). Bethesda, MD: Carcinogenesis Testing Program, National Cancer Institute, National Institute of Health. Research Triangle Park, NC: National Toxicology Program. DHHS publication no. 82-1765.

*Okey AB, Riddick DS, Harper PA. 1994. The Ah receptor: Mediator of the toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) and related compounds. *Toxicol Lett* 70:1-22.

Olivero-Verbel J, Ganey PE. 1998. Effect of three polychlorinated biphenyls on f-met-leu-phe-induced degranulation in rat neutrophils. *Toxicol Lett* 98:195-202.

*Omara FO, Brochu C, Flipo D, et al. 1997. Immunotoxicity of environmentally relevant mixtures of polychlorinated aromatic hydrocarbons with methyl mercury on rat lymphocytes *in vitro*. *Environ Toxicol Chem* 16(3):576-581.

*Omara FO, Flipo D, Brochu C, et al. 1998. Lack of suppressive effects of mixtures containing low levels of methylmercury (MeHg), polychlorinated dibenzo-p-dioxins (PCDDs), polychlorinated dibenzofurans (PCDFs), and aroclor biphenyls (PCBs) on mixed lymphocyte reaction, phagocytic, and natural killer cell activities of rat leukocytes *in vitro*. *J Toxicol Environ Health* A54:561-577.

Pang S, Cao JQ, Katz BH, et al. 1999. Inductive and inhibitory effects of non-*ortho*-substituted polychlorinated biphenyls on estrogen metabolism and human cytochromes P450 1A1 and 1B1. *Biochem Pharmacol* 58:29-38.

Pappas BA, Murtha SJE, Park GAS, et al. 1998. Neurobehavioral effects of chronic ingestion of Great Lakes chinook salmon. *Regul Toxicol Pharmacol* 27:S55-S67.

*Parham FM, Portier CJ. 1998. Using structural information to create physiologically based pharmacokinetic models for all polychlorinated biphenyls. *Toxicol Appl Pharmacol* 151:110-116.

*Patandin S, Dagnelie PC, Mulder PGH, et al. 1999b. Dietary exposure to polychlorinated biphenyls and dioxins from infancy until adulthood: A comparison between breast-feeding, toddler, and long-term exposure. *Environ Health Perspect* 107:45-51.

*Patandin S, Koopman-Esseboom C, De Ridder MAJ, et al. 1998. Effects of environmental exposure to Polychlorinated biphenyls and dioxins on birth size and growth in Dutch children. *Pediatr Res* 44(4):538-545.

*Patandin S, Lanting CI, Mulder PGH, et al. 1999a. Effects of environmental exposure to polychlorinated biphenyls and dioxins on cognitive abilities in Dutch children at 42 months of age. *J Pediatr* 134(1):33-41.

*Patnode KA, Curtis LR. 1994. 2,2',4,4',5,5'- and 3,3',4,4',5,5'-Hexachlorobiphenyl alteration of uterine progesterone and estrogen receptors coincides with embryotoxicity in mink (*Mustela vison*). *Fundam Appl Toxicol* 127:9-18.

Pessah IN. 1998. Role for the major T-cell immunophilin FKBP12 in mediating neurotoxicity of non-coplanar PCBs. *Neurotoxicol Teratol* 20(3):350.

*Pohl HR, Hibbs BF. 1996. Breast-feeding exposure of infants to environmental contaminants - A public health risk assessment viewpoint: Chlorinated dibenzodioxins and chlorinated dibenzofurans. *Toxicol Ind Health* 12(5):593-611.

*Pohl HR, Tylenda CA. 2000. Breast-feeding exposure of infants to selected pesticides: A public health viewpoint. *Toxicol Ind Health*: In press.

*Poland A, Knutson JC. 1982. 2,3,7,8-Tetrachlorodibenzo-p-dioxin and related halogenated aromatic hydrocarbons. Examinations of the mechanisms of toxicity. *Ann Rev Pharmacol Toxicol* 22:57-end

*Porterfield SP, Hendry LB. 1998. Impact of PCBs on thyroid hormone directed brain development. *Toxicol Ind Health* 14:103-120.

*Preston BD, Miller EC, Miller JA. 1985. The activities of 2,2',5,5'-tetrachlorobiphenyl, its 3,4-oxide metabolite, and 2,2',4,4'-tetrachlorobiphenyl in tumor induction and promotion assays. *Carcinogenesis* 6(3):451-453.

*Price SC, Ozalp S, Weaver R, et al. 1988. Thyroid hyperactivity caused by hypolipidaemic compounds and polychlorinated biphenyls: The effect of coadministration in the liver and thyroid. *Arch Toxicol Suppl* 12:85-92.

*Provost TL, Juarez De Ku LM, Zender C, et al. 1999. Dose- and age-dependent alterations in choline acetyltransferase (ChAT) activity, learning and memory, and thyroid hormones in 15- and 30-day old rats exposed to 1.25 or 12.5 ppm polychlorinated biphenyl (PCB) beginning at conception. *Prog Neuro-Psychopharmacol Biol Psychiat* 23:915-928.

*Renner G. 1980. Toxicities of combinations of pentachloronitrobenzene with mercuric chloride or cadmium chloride, and hexachlorobenzene with mercuric chloride administered to rats. *Xenobiotica* 10(7-8):551-556.

*Restum JC, Bursian SJ, Giesy JP, et al. 1998. Multigenerational study of the effects of consumption of PCB-contaminated carp from Saginaw Bay, Lake Huron, on mink. 1. Effects on mink reproduction, kit growth and survival, and selected biological parameters. *J Toxicol Environ Health, A* 54:343-375.

Rice DC. 1995. Neurotoxicity of lead, methylmercury, and PCBs in relation to the Great Lakes. *Environ Health Perspect Suppl* 103(9):71-87.

*Rice DC. 1997. Effect of postnatal exposure to a PCB mixture in monkeys on multiple fixed interval-fixed ratio performance. *Neurotoxicol Teratol* 19(6):429-434.

*Rice DC. 1998. Effects of postnatal exposure of monkeys to a PCB mixture on spatial discrimination reversal and DRL performance. *Neurotoxicol Teratol* 20(4):391-400.

*Rice DC. 1999a. Behavioral impairment produced by low-level postnatal PCB exposure in monkeys. *Environ Res* 80:S113-S121.

*Rice DC. 1999b. Effect of exposure to 3,3',4,4',5-pentachlorobiphenyl (PCB 126) throughout gestation and lactation on development and spatial delayed alternation performance in rats. *Neurotoxicol Teratol* 21(1):59-69.

*Rice DC. 2000. Parallels between attention deficit hyperactivity disorder and behavioral deficits produced by neurotoxic exposure in monkeys. *Environ Health Perspect Suppl* 108(3):405-408.

*Rice DC, Hayward S. 1997. Effects of postnatal exposure to a PCB mixture in monkeys on nonspatial discrimination reversal and delayed alternation performance. *Neurotoxicology* 18(2):479-494.

*Rice DC, Hayward S. 1999. Effects of exposure to 3,3',4,4',5-pentachlorobiphenyl (PCB 126) throughout gestation and lactation on behavior (concurrent random interval-random interval and progressive ratio performance) in rats. *Neurotoxicol Teratol* 21(6):679-687.

Rice DC, Cherry W, Kehn L, et al. 1997. Perinatal exposure to PCB 126: Thyroid hormones and ototoxicity. *Toxicologist* 36(1 part 2):61.

Riddick DS, Huang Y, Harper PA, et al. 1994. 2,3,7,8-tetrachlorodibenzo-*p*-dioxin versus 3-methylcholanthrene: Comparative studies of Ah receptor binding, transformation, and induction of CYP1A1. *J Biol Chem* 269(16):12118-12128.

*Rier SE, Martin DC, Bowman RE, et al. 1993. Endometriosis in Rhesus monkeys (*Macaca mulatta*) following chronic exposure to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin. *Fundam Appl Toxicol* 21:433-441.

*Risebrough RW, Anderson DW. 1975. Some effects of DDE and PCB on mallards and their eggs. *J Wildl Manage* 39(3):508-513.

*Robertson LW, Gupta RC. 2000. Metabolism of polychlorinated biphenyls (PCBs) generates electrophiles and reactive oxygen species that damage DNA. In: Williams GM, Aruoma OI, eds. Molecular drug metabolism and toxicology. OICA International, 1-19.

*Rogan WJ. 1996. Pollutants in breast milk. Arch Pediatr Adolesc Med 150:981-990.

Rogan WJ, Gladen BC. 1985. Study of human lactation for effects of environmental contaminants: The North Carolina breast milk and formula project and some other ideas. Environ Health Perspect 60:215-221.

Rogan WJ, Blanton PJ, Portier CJ, et al. 1991. Should the presence of carcinogens in breast milk discourage breast feeding? Regul Toxicol Pharmacol 13:228-240.

*Rogan WJ, Gladen BC, McKinney JD, et al. 1986b. Neonatal effects of transplacental exposure to PCBs and DDE. J Pediatr 109:335-341.

*Rogan WJ, Gladen BC, McKinney JD, et al. 1986a. Polychlorinated biphenyls (PCBs) and dichlorophenyl dichloroethene (DDE) in human milk: Effects of maternal factors and previous lactation. Am J Public Health 76:172-177.

*Rogan WJ, Gladen BC, McKinney JD, et al. 1987. Polychlorinated biphenyls (PCBs) and dichlorodiphenyl dichloroethene (DDE) in human milk: Effects on growth, morbidity, and duration of lactation. Am J Public Health 77:1294-1297.

*Roman BL, Pollenz RS, Peterson RE. 1998a. Responsiveness of the adult male rat reproductive tract to 2,3,7,8-tetrachlorodibenzo-p-dioxin exposure: Ah receptor and ARNT expression, CY1A1 induction, and Ah receptor down-regulation. Toxicol Appl Pharmacol 150:228-239.

*Roman BL, Sommer RJ, Shinomiya K, et al. 1995. *In utero* and lactational exposure of the male rat to 2,3,7,8-tetrachlorodibenzo-p-dioxin: Impaired prostate growth and development without inhibited androgen production. Toxicol Appl Pharmacol 134:241-250.

*Roman BL, Timms BG, Prins GS, et al. 1998b. *In utero* and lactational exposure of the male rat to 2,3,7,8-tetrachlorodibenzo-p-dioxin impairs prostate development: 2. Effects on growth and cytodifferentiation. Toxicol Appl Pharmacol 150:254-270.

*Ross PS, De Swart RL, Reijnders PJH, et al. 1995. Contaminant-related suppression of delayed-type hypersensitivity and antibody responses in harbor seals fed herring from the Baltic Sea. Environ Health Perspect 103(2):162-167.

Rozman K, Mueller W, Coulston F, et al. 1977. Long-term feeding study of hexachlorobenzene in rhesus monkeys: (Preliminary communication). Chemosphere 2/3:81-84.

Rozman K, Rozman T, Greim H. 1981. Enhanced fecal elimination of stored hexachlorobenzene from rats and rhesus monkeys by hexadecane or mineral oil. Toxicology 22:33-44.

Rudy TA, Moore RW, Peterson RE. 1998. Effects of *in utero* and lactational PCB 153-, 105-, and 126-exposure on masculine sexual behaviors in rats. Toxicologist 42(1-S):135.

Rylander L, Hagmar L. 1995. Mortality and cancer incidence among women with a high consumption of fatty fish contaminated with persistent organochlorine compounds. *Scand J Work Environ Health* 21:419-426.

*Rylander L, Hagmar L. 1999. Anthropometric and psychometric examinations of conscripts born to mothers with a high intake of fish contaminated with persistent organochlorines. In: *Dioxin 99: International Symposium on halogenated environmental organic pollutants and POPs. Organohalogen Compounds* 44:413-416.

*Rylander L, Stromberg U, Dyremark E, et al. 1998a. Polychlorinated biphenyls in blood plasma among Swedish female fish consumers in relation to low birth weight. *Am J Epidemiol* 147(5):493-502.

*Rylander L, Stromberg U, Hagmar L. 1995. Decreased birthweight among infants born to women with a high dietary intake of fish contaminated with persistent organochlorine compounds. *Scand J Work Environ Health* 21:368-375.

*Rylander L, Stromberg U, Hagmar L. 1996. Dietary intake of fish contaminated with persistent organochlorine compounds in relation to low birthweight. *Scand J Work Environ Health* 22:260-266.

*Rylander L, Stromberg U, Hagmar L. 1998b. Lowered birthweight among infants born to women with high intake of fish contaminated with persistent organochlorine compounds. In: *Organohalogen Compounds* 38:275-277.

*Safe S. 1984. Polychlorinated biphenyls (PCBs) and polybrominated biphenyls (PBBs): Biochemistry, toxicology, and mechanism of action. *Crit Rev Toxicol* 13:319-395.

*Safe S. 1990. Polychlorinated biphenyls (PCBs), dibenzo-p-dioxins (PCDDs), dibenzofurans (PCDFs), and related compounds: Environmental and mechanistic considerations which support the development of toxic equivalency factors (TEFs). *Crit Rev Toxicol* 21:51-88.

Safe S. 1992. Toxicology, structure-function relationship, and human and environmental health impacts of polychlorinated biphenyls: Progress and problems. *Environ Health Perspect* 100:259-268.

Safe S. 1995. Environmental and dietary estrogens and human health: Is there a problem? *Environ Health Perspect* 103:346-351.

*Safe S. 1998a. Limitations of the toxic equivalency factor approach for the risk assessment of TCDD and related compounds. *Teratogen Carcinogen Mutagen* 17:285-304.

*Safe S. 1998b. Development validation and problems with the toxic equivalency factor approach for risk assessment of dioxins and related compounds. *J Anim Sci* 76(1):134-141.

Safe SH. 1994a. Dietary and environmental estrogens and antiestrogens and their possible role in human disease. *Environ Sci Pollut Res* 1(1):29-33.

*Safe SH. 1994b. Polychlorinated biphenyls (PCBs): Environmental impact, biochemical and toxic responses, and implications for risk assessment. *Crit Rev Toxicol* 24(2):87-149.

*Safe SH. 1999. 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) and related environmental antiestrogens: Characterization and mechanism of action. In: Naz RK, ed. Endocrine disruptors: effects on male and female reproductive systems. Boca Raton, FL: CRC Press, 187-221.

Safe SH, Gaido K. 1998. Phytoestrogens and anthropogenic estrogenic compounds. Environ Toxicol Chem 17(1):119-126.

Safe S, Connor K, Gaido K. 1998a. Methods for xenoestrogen testing. Toxicol Lett 102-103:665-670.

Safe SD, Bannister R, Davis D, et al. 1989. Aroclor 1253 as a 2,3,7,8-tetrachlorodibenzo-p-dioxin antagonist in mice. Chemosphere 18(1-6):709-714.

*Safe SH, Connor K, Raamamorthy K, et al. 1998b. Estrogenic activity of hydroxylated polychlorinated biphenyls (PCBs) and their interactions. In: Eisenbrand G, ed. Hormonally active agents in food: Symposium. Weinheim, FRG: Wiley-VCH, 200-207.

*Sager DB, Girard DM. 1994. Long-term effects on reproductive parameters in female rats after translactational exposure to PCBs. Environ Res 66(1):52-76.

*Sager D, Girard D, Nelson D. 1991. Early postnatal exposure to PCBs: Sperm function in rats. Environ Toxicol Chem 10:737-746.

*Sager DB, Shih-Schroeder W, Girard D. 1987. Effect of early postnatal exposure to polychlorinated biphenyls (PCBs) on fertility in male rats. Bull Environ Contam Toxicol 38:946-953.

Saghir SA, Koritz GD, Hansen LG. 1999. Short-term distribution, metabolism, and excretion of 2,2',5-tri, 2,2',4,4'-tetra, and 3,3',4,4'-tetrachlorobiphenyls in prepubertal rats. Arch Environ Contam Toxicol 36:213-220.

Sanchez E, Santiago MF, Lopez-Aparicio P, et al. 1997. Effect of Aroclor 1248 and two pure PCB congeners upon the release of arachidonic acid from the intracellular phospholipids of rat renal tubular cell cultures. Pestic Biochem Physiol 59:25-34.

Sanz-Gallardo MI, Guallar E, Van T'Veer P, et al. 1999. Determinants of *p,p'*-dichlorodiphenyldichloroethane (DDE) concentration in adipose tissue in women from five European cities. Arch Environ Health 54(4):277-283.

Sargent L, Dragan YP, Erickson C, et al. 1991. Study of the separate and combined effects of the non-planar 2,5,2',5'- and the planar 3,4,3',4'-tetrachlorobiphenyl in liver and lymphocytes *in vivo*. Carcinogenesis 12:793-800.

Sauer PJJ, Huisman M, Koopman-Esseboom C, et al. 1994. Effects of polychlorinated biphenyls (PCBs) and dioxins on growth and development. Hum Exp Toxicol 13:900-906.

Sawyer TW, Safe S. 1985. In vitro AHH induction by polychlorinated biphenyl and dibenzofuran mixtures: Additive effects. Chemosphere 14(1):79-84.

Schantz SL. 1996. Developmental neurotoxicity of PCBs in humans: What do we know and where do we go from here? Neurotoxicol Teratol 18(3):217-227.

Schantz SL. 1998. Developmental exposure to polychlorinated biphenyls impairs learning and memory in primates and rodents. [Abstract]. *Neurotoxicol Teratol* 20(3):349.

*Schantz SL, Gardiner JC, Gasior DM, et al. 1999. Motor function in aging Great Lakes fisheaters. *Environ Res* 80:546-556.

Schantz SL, Jacobson JL, Humphrey HEB, et al. 1994. Determinants of polychlorinated biphenyls (PCBs) in the sera of mothers and children from Michigan farms with PCB-contaminated silos. *Arch Environ Health* 49:452-458.

Schantz SL, Moshtaghian J, Ness DK. 1992. Long-term effects of perinatal exposure to PCB congeners and mixtures on locomotor activity in rats. *Teratology* 45(5):524-525.

Schantz SL, Seo B-W, Moshtaghian J, et al. 1997a. Developmental exposure to polychlorinated biphenyls or dioxin: Do changes in thyroid function mediate effects on spatial learning. *Am Zool* 37:399-408.

*Schantz SL, Seo B-W, Wong PW, et al. 1997b. Long-term effects of developmental exposure to 2,2',3,5',6-pentachlorobiphenyl (PCB 95) on locomotor activity, spatial learning and memory and brain ryanodine binding. *Neurotoxicology* 18(2):457-468.

Schantz SL, Sweeney AM, Gardiner JC, et al. 1996. Neuropsychological assessment of an aging population of Great Lakes fisheaters. *Toxicol Ind Health* 12(3-4):403-417.

Schechter A, Li L. 1997. Dioxins, dibenzofurans, dioxin-like PCBs, and DDE in U.S. fast food, 1995. *Chemosphere* 34(5-7):1449-1457.

Schechter A, Cramer P, Boggess K, et al. 1997. Levels of dioxins, dibenzofurans, PCB and DDE congeners in pooled food samples collected in 1995 at supermarkets across the United States. *Chemosphere* 34(5-7):1437-1447.

Schechter A, Ryan JJ, Papke O. 1998. Decrease in levels and body burden of dioxins, dibenzofurans, PCBs, DDE, and HCB in blood and milk in a mother nursing twins over a thirty-eight month period. *Chemosphere* 37(9-12):1807-1816.

Scherb H, Weigelt E, Oxynos K, et al. 1990. [Organochlorine compounds in human milk.] *Zentralblatt fuer Hygiene und Umweltmedizin* 190:558-568. (German)

Schielen P, Den Besten C, Vos JG, et al. 1995. Immune effects of hexachlorobenzene in the rat: Role of metabolism in a 13-week feeding study. *Toxicol Appl Pharmacol* 131:37-43.

Schielen P, Van Der Pijl A, Bleumink R, et al. 1996. Local popliteal lymph node reactions to hexachlorobenzene and pentachlorobenzene: Comparison with systemic effects. *Immunopharmacology* 31:171-181.

Schlummer M, Moser GA, McLachlan MS. 1998. Digestive tract absorption of PCDD/Fs, PCBs, and HCB in humans: Mass balances and mechanistic considerations. *Toxicol Appl Pharmacol* 152:128-137.

Schmitz HJ, Hagenmaier A, Hagenmaier HP, et al. 1995. Potency of mixtures of polychlorinated biphenyls as inducers of dioxin receptor-regulated CYP1A activity in rat hepatocytes and H4IIE cells. *Toxicology* 99:47-54.

*Schuur AG, Bergman A, Brouwer A, et al. 1999. Effects of pentachlorophenol and hydroxylated polychlorinated biphenyls on thyroid hormone conjugation in a rat and a human hepatoma cell line. *Toxicol in Vitro* 13:417-425.

*Schuur AG, Cenjin PH, van Toor H, et al. 1998a. Effect of Aroclor 1254 on thyroid hormone sulfation in fetal rats. In: Johansson N, Bergman A, Broman D, et al., ed. *Organohalogen compounds*. Akademityck, Edsbruk; Vol. 37, 249-252.

*Schuur AG, van Leeuwen-Bol I, Jong WMC, et al. 1998b. *In vitro* inhibition of thyroid hormone sulfation by polychlorobiphenylols: Isozyme specificity and inhibition kinetics. *Toxicol Sci* 45:188-194.

Schwab BW. 1999. The TEF approach for hexachlorobenzene. *Environ Health Perspect* 107(4):A183-A184.

Seegal RF. 1996a. Can epidemiological studies discern subtle neurological effects due to perinatal exposure to PCBs? *Neurotoxicol Teratol* 18(3):251-254.

*Seegal RF. 1996b. Epidemiological and laboratory evidence of PCB-induced neurotoxicity. *Crit Rev Toxicol* 26(6):709-737.

*Seegal RF. 1998. Neurochemical effects of co-planar and non-coplanar polychlorinated biphenyls. [Abstract]. *Neurotoxicol Teratol* 20(3):349-350.

Seegal RF. 1999. Are PCBs the major neurotoxicant in Great Lakes salmon? *Environ Res* 80:S38-S45.

*Seegal RF, Brosch K, Bush, B et al. 1989. Effects of Aroclor 1254 on dopamine and norepinephrine concentrations in pheochromocytoma (PC-12) cells. *Neurotoxicology* 10:757-764.

*Seegal RF, Brosch KO, Okoniewski RJ. 1997. Effects of *in utero* and lactational exposure of the laboratory rat to 2,4,2',4'- and 3,4,3',4'-tetrachlorobiphenyl on dopamine function. *Toxicol Appl Pharmacol* 146:95-103.

*Seegal RF, Bush B, Shain W. 1990. Lightly chlorinated *ortho*-substituted PCB congeners decrease dopamine in nonhuman primate brain and in tissue culture. *Toxicol Appl Pharmacol* 106:136-144.

Seegal RF, Pappas BA, Park GAS. 1998. Neurochemical effects of consumption of Great Lakes salmon by rats. *Regul Toxicol Pharmacol* 27:S68-S75.

*Seiler P, Fischer B, Lindenau A, et al. 1994. Effects of persistent chlorinated hydrocarbons on fertility and embryonic development in the rabbit. *Human Reprod* 9:1920-1926.

*Seo BW, Meserve LA. 1995. Effects of maternal ingestion of Aroclor 1254 (PCB) on the developmental pattern of oxygen consumption and body temperature in neonatal rats. *Bull Environ Contam Toxicol* 55:22-28.

Seo B-W, Li M-H, Hansen LG, et al. 1995. Effects of gestational and lactational exposure to coplanar polychlorinated biphenyl (PCB) congeners of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) on thyroid hormone concentrations in weanling rats. *Toxicol Lett* 78:253-262.

Seo BW, Moshtaghian J, Peterson RE, et al. 1996. Effects of gestational and lactational exposure to ortho-substituted PCBs, coplanar PCBs, or TCDD on locomotor activity in rats. *Toxicologist* 30(1 part 2):225.

*Shain W, Bush B, Seegal R. 1991. Neurotoxicity of polychlorinated biphenyls: Structure-activity relationship of individual congeners. *Toxicol Appl Pharmacol* 111:33-42.

*Shenker BJ, Berthold P, Rooney C, et al. 1993. Immunotoxic effects of mercuric compounds on human lymphocytes and monocytes. III. Alterations in B-cell function and viability. *Immunopharmacol Immunotoxicol* 15(1):87-112.

Shirai T, Miyata Y, Nakanishi K, et al. 1978. Hepatocarcinogenicity of polychlorinated terphenyl (PCT) in ICR mice and its enhancement by hexachlorobenzene (HCB). *Cancer Lett* 4:271-275.

Sikorski R, Paszkowski T, Radomanski T, et al. 1990. Human colostrum as a source of organohalogen xenobiotics for a xenobiotics for a breast-fed neonate. *Reprod Toxicol* 4:17-20.

*Silberhorn EM, Glauert HP, Robertson LW. 1990. Carcinogenicity of polyhalogenated biphenyls: PCBs and PBBs. *Crit Rev Toxicol* 20:440-496.

*Silkworth JB, Grabstein EM. 1982. Polychlorinated biphenyl immunotoxicity: Dependence on isomer planarity and the Ah gene complex. *Toxicol Appl Pharmacol* 65:109-115.

Silkworth JB, Sutter TR, Kim JH, et al. 1999. CYP1A1 and CYP1B1 expression in Sprague-Dawley rats fed Aroclors 1016, 1242, 1254, and 1260 for 6 months. *Organohalogen Compounds* 42:481-484.

Sinclair PR, Gorman N, Sinclair JF, et al. 1995. Ascorbic acid inhibits chemically induced uroporphyrin in ascorbate-requiring rats. *Hepatology* 22(2):565-572.

*Sinclair PR, Walton HS, Gorman N, et al. 1997. Multiple roles of polyhalogenated biphenyls in causing increases in cytochrome P450 and uroporphyrin accumulation in cultured hepatocytes. *Toxicol Appl Pharmacol* 147:171-179.

Sinjari T, Klasson-Wehler E, Hovander L, et al. 1998. Hydroxylated polychlorinated biphenyls: distribution in the pregnant mouse. *Xenobiotica* 28(1):31-40.

Sipes IG, Schnellmann RG. 1987. Biotransformation of PCBs: Metabolic pathways and mechanisms. *Environ Toxin Ser* 1:97-110.

Skaare JU, Polder A. 1990. Polychlorinated biphenyls and organochlorine pesticides in milk of Norwegian women during lactation. *Arch Environ Contam Toxicol* 19:640-645.

Smeets JMW, van Holsteijn I, Giesy JP, et al. 1999. The anti-estrogenicity of Ah receptor agonists in carp (*cyprinus carpio*) hepatocytes. *Toxicol Sci* 52:178-188.

*Smialowicz RJ, DeVito MJ, Riddle MM, et al. 1997. Opposite effects of 2,2',4,4',5,5'-hexachlorobiphenyl and 2,3,7,8-tetrachlorodibenzo-p-dioxin on the antibody response to sheep erythrocytes in mice. *Fundam Appl Toxicol* 37:141-149.

Smith AG, Carthew P, Francis JE, et al. 1993. Enhancement by iron of hepatic neoplasia in rats caused by hexachlorobenzene. *Carcinogenesis* 14(7):1381-1387.

*Smith AG, Dinsdale D, Cabral JRP, et al. 1987. Goitre and wasting induced in hamsters by hexachlorobenzene. *Arch Toxicol* 60:343-349.

*Smith AG, Francis JE, Carthew P. 1990a. Iron as a synergist for hepatocellular carcinoma induced by polychlorinated biphenyls in *Ah*-responsive C57BL/10ScSn mice. *Carcinogenesis* 11(3):437-444.

*Smith AG, Francis JE, Green JA, et al. 1990b. Sex-linked hepatic uroporphyrin and the induction of cytochromes P450IA in rats caused by hexachlorobenzene and polyhalogenated biphenyls. *Biochem Pharmacol* 40(9):2059-2068.

Smith MA. 1997. Reassessment of the carcinogenicity of polychlorinated biphenyls (PCBs). *J Toxicol Environ Health* 50:567-579.

Sonnenschein C, Soto AM. 1998. An updated review of environmental estrogen and androgen mimics and antagonists. *J Steroid Biochem Mol Biol* 65:143-150.

*Stack AS, Altman-Hamamdzic S, Morris PJ, et al. 1999. Polychlorinated biphenyl mixtures (Aroclors) inhibit LPS-induced murine splenocyte proliferation in vitro. *Toxicology* 139:137-154.

*Stahl BU, Kettup A, Rozman K. 1992. Comparative toxicity of four chlorinated dibenzo-p-dioxins (CDDs) and their mixture: Part I: Acute toxicity and toxic equivalency factors (TEFs). *Arch Toxicol* 66:471-477.

Stevens MF, Ebell GF, Psaila-Savona P. 1993. Organochlorine pesticides in Western Australia nursing mothers. *Med J Aust* 158:238-241.

*Stewart P, Darvill T, Lonky E, et al. 1999. Assessment of prenatal exposure to PCBs from maternal consumption of Great Lakes fish: An analysis of PCB pattern and concentration. *Environ Res* 80:S87-S96.

Stewart P, Pagano J, Sargent D, et al. 2000a. Effects of Great Lakes fish consumption on brain PCB pattern, concentration, and progressive-ratio performance. *Environ Res* 82:18-32.

*Stewart P, Reihman J, Lonky E, et al. 2000b. Prenatal PCB exposure and neonatal behavioral assessment scale (NBAS) performance. *Neurotoxicol Teratol* 22:21-29.

*Sufit RL, Hodach R, Arends R, et al. 1986. Decreased conduction velocity and pseudomyotonia in hexachlorobenzene-fed rats. In: Hexachlorobenzene: Proceedings of an international symposium. IARC Sci Publ 77:361-362.

*Svensson B-G, Hallberg T, Nilsson A, et al. 1994. Parameters of immunological competence in subjects with high consumption of fish contaminated with persistent organochlorine compounds. *Int Arch Occup Environ Health* 65:351-358.

Svensson B-G, Nilsson A, Hansson M, et al. 1991. Exposure to dioxins and dibenzofurans through the consumption of fish. *N Engl J Med* 324:8-12.

Svensson B-G, Nilsson A, Jonsson E, et al. 1995. Fish consumption and exposure to persistent organochlorine compounds, mercury, selenium and methylamines among Swedish fishermen. *Scand J Work Environ Health* 21:96-105.

Swain WR. 1991. Effects of organochlorine chemicals on the reproductive outcome of humans who consumed contaminated Great Lakes fish: An epidemiologic consideration. *J Toxicol Environ Health* 33:587-639.

*Swanson GM, Ratcliffe HE, Fischer LJ. 1995. Human exposure to polychlorinated biphenyls (PCBs): A critical assessment of the evidence for adverse health effects. *Regul Toxicol Pharmacol* 21:136-150.

*Takabatake E, Fujita M, Sawa Y. 1980. Combined effects of polychlorinated biphenyls and methyl-mercury on hepatic microsomal monooxygenases and the hepatotoxic action of bromobenzene. *J Pharmacobiodyn* 3:463-469.

*Tanimura T, Ema M, Kihara T. 1980. Effects of combined treatment with methylmercury and polychlorinated biphenyls (PCBs) on the development of mouse offspring. In: Persaud TVN, ed. *Neural and behavioral teratology*. Baltimore, MD: University Park Press, 163-198.

*Tilson HA, Kodavanti PRS. 1997. Neurochemical effects of polychlorinated biphenyls: An overview and identification of research needs. *Neurotoxicology* 18(3):727-744.

*Tilson HA, Kodavanti PRS. 1998. The neurotoxicity of polychlorinated biphenyls. *Neurotoxicology* 19(4-5):517-526.

*Tilson HA, Kodavanti PRS, Mundy WR, et al. 1998. Neurotoxicity of environmental chemicals and their mechanism of action. *Toxicol Lett* 102-103:631-635.

*Tithof PK, Contreras ML, Ganey PE. 1995. Aroclor 1242 stimulates the production of inositol phosphates in polymorphonuclear neutrophils. *Toxicol Appl Pharmacol* 131:136-143.

Toppari J, Skakkebaek NE. 1998. Sexual differentiation and environmental endocrine disrupters. *Baillieres Clin Endocrinol Metabol* 12(1):143-156.

Toraason M. 1999. 8-Hydroxydeoxyguanosine as a biomarker of workplace exposures. *Biomarkers* 4(1):3-26.

Tryphonas H. 1994. Immunotoxicity of polychlorinated biphenyls: present status and future considerations. *Exp Clin Immunogenet* 11:149-162.

Tryphonas H. 1995. Immunotoxicity of PCBs (Aroclors) in relation to Great Lakes. *Environ Health Perspect Suppl* 103(9):35-46.

Tryphonas H, Fournier M, Lacroix F, et al. 1998a. Effects of Great Lakes fish consumption on the immune system of Sprague-Dawley rats investigated during a two-generation reproductive study: II. Quantitative and functional aspects. *Regul Toxicol Pharmacol* 27:S40-S54.

*Tryphonas H, Hayward S, O'Grady L, et al. 1989. Immunotoxicity studies of PCB (Aroclor 1254) in the adult Rhesus (*Macaca mulatta*) monkey-preliminary report. *Int J Immunopharmacol* 11(2):199-206.

Tryphonas H, Luster MI, Schiffman G, et al. 1991a. Effect of chronic exposure of PCB (Aroclor 1254) on specific and nonspecific immune parameters in the Rhesus (*Macaca mulatta*) monkey. *Fundam Appl Toxicol* 16:773-786.

Tryphonas H, Luster MI, White KL, et al. 1991b. Effects of PCB (Aroclor 1254) on non-specific immune parameters in Rhesus (*Macaca mulatta*) monkeys. *Int J Immunopharmacol* 13(6):639-648.

Tryphonas H, McGuire P, Fernie S, et al. 1998b. Effects of Great Lakes fish consumption on the immune system of Sprague-Dawley rats investigated during a two-generation reproductive study: I. Body and organ weights, food consumption, and hematological parameters. *Regul Toxicol Pharmacol* 27:S28-S39.

*Tryphonas L, Arnold DL, Zawidzka Z, et al. 1986a. A pilot study in adult Rhesus monkeys (*m.mullata*) treated with Aroclor 1254 for two years. *Toxicol Pathol* 14:1-10.

*Tryphonas L, Charbonneau S, Tryphonas H, et al. 1986b. Comparative aspects of Aroclor 1254 toxicity in adult Cynomolgus and Rhesus monkeys: A pilot study. *Arch Environ Contam Toxicol* 15:159-169.

Tryphonas L, Truelove J, Zawidzka Z, et al. 1984. Polychlorinated biphenyl (PCB) toxicity in adult Cynomolgus monkeys (*m. fascicularis*): A pilot study. *Toxicol Pathol* 12:10-25.

Tsai —L, Webb RC, Loch-Caruso R. 1996. Congener-specific effects of PCBs on contractions of pregnant rat uteri. *Reprod Toxicol* 10(1):21-28.

Turner KJ, Sharpe RM. 1997. Environmental oestrogens - present understanding. *Rev Reprod* 2:69-73.

Unkila M, Pohjanvirta R, MacDonald E, et al. 1994. Dose response and time course of alterations in tryptophan metabolism by 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD) in the most TCDD-susceptible and the most TCDD-resistant rat strain: Relationship with TCDD lethality. *Toxicol Appl Pharmacol* 128:280-292.

Urieta I, Jalon M, Eguileor I. 1996. Food surveillance in the Basque Country (Spain). II. Estimation of the dietary intake of organochloride pesticides, heavy metals, arsenic, aflatoxin M₁, iron and zinc through the Total Diet Study, 1990/91. *Food Addit Contam* 13(1):29-52.

*van Birgelen APJM. 1998. Hexachlorobenzene as a possible major contributor to the dioxin activity of human milk. *Environ Health Perspect* 106(11):683-688.

*van Birgelen APJM, Fase KM, van der Kolk J, et al. 1996a. Synergistic effect of 2,2',4,4',5,5'-hexachlorobiphenyl and 2,3,7,8-tetrachlorodibenzo-*p*-dioxin on hepatic porphyrin levels in the rat. *Environ Health Perspect* 104(5):550-557.

Van Birgelen APJM, Ross DG, Devito MJ, et al. 1996b. Interactive effects between 2,3,7,8-tetrachlorodibenzo-*p*-dioxin and 2,2',4,4',5,5'-hexachlorobiphenyl in female B6C3F1 mice: Tissue distribution and tissue-specific enzyme induction. *Fundam Appl Toxicol* 34:118-131.

*Van Birgelen APJM, Van Der Kolk J, Fase KM, et al. 1994a. Toxic potency of 2,3,3',4,4',5-hexachlorobiphenyl relative to and in combination with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in a subchronic feeding study in the rat. *Toxicol Appl Pharmacol* 126:202-213.

*Van Birgelen APJM, Van Der Kolk J, Fase KM, et al. 1994b. Toxic potency of 3,3',4,4',5-pentachlorobiphenyl relative to and in combination with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in a subchronic feeding study in the rat. *Toxicol Appl Pharmacol* 127:209-221.

*van Birgelen APJM, Van der Kolk J, Fase KM, et al. 1995. Subchronic dose-response study of 3,4,7,8-tetrachlorodibenzo-*p*-dioxin in female Sprague-Dawley rats. *Toxicol Appl Pharmacol* 132:1-13.

*van Birgelen APJM, van der Kolk J, Poiger H, et al. 1992. Interactive effects of 2,2',4,4',5,5'-hexachlorobiphenyl and 2,3,7,8-tetrachlorodibenzo-*p*-dioxin on thyroid hormone, Vitamin A, and Vitamin K metabolism in the rat. *Chemosphere* 25:7-10.

Van Den Berg KJ. 1990. Interaction of chlorinated phenols with thyroxine binding sites of human transthyretin, albumin and thyroid binding globulin. *Chem Biol Interact* 76:63-75.

*Van den Berg M, Birnbaum L, Bosveld ATC, et al. 1998. Toxic equivalency factors (TEFs) for PCBs, PCDDs, PCDFs for humans and wildlife. *Environ Health Perspect* 106(12):775-792.

*Van den Berg M, De Jongh J, Poiger H, et al. 1994. The toxicokinetics and metabolism of polychlorinated dibenzo-*p*-dioxins (PCDDs) and dibenzofurans (PCDFs) and their relevance for toxicity. *Crit Rev Toxicol* 24(1):1-74.

Van den Berg M, de Vroom E, Olie K, et al. 1986a. Bioavailability of PCDDs and PCDFs on fly ash after semi-chronic oral ingestion by guinea pig and Syrian golden hamster. *Chemosphere* 15(4):519-533.

Van den Berg M, Van Greevenbroek M, Olie X, et al. 1986b. Bio-availability of PCDDs and PCDFs on fly ash after semi-chronic oral ingestion by the rat. *Chemosphere* 13(4):509-513.

*van der Burght ASAM, Clijsters PJ, Horbach GJ, et al. 1999. Structure-dependent induction of CYP1A by polychlorinated biphenyls in hepatocytes of Cynomolgus monkeys (*Macaca fascicularis*). *Toxicol Appl Pharmacol* 155:13-23.

*van der Kolk J, van Birgelen APJM, Poiger H, et al. 1992. Interactions of 2,2',4,4',5,5'-hexachlorobiphenyl and 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in a subchronic feeding study in the rat. *Chemosphere* 25(12):2023-2027.

van der Plas SA, de Jongh J, Faassen-Peters M, et al. 1998. Toxicokinetics of an environmentally relevant mixture of dioxin-like PAHs with or without a non-dioxin-like PCB in a semi-chronic exposure study in female Sprague Dawley rats. *Chemosphere* 37(9-12):1941-1955.

*van der Plas SA, Haag-Gronlund M, Scheu G, et al. 1999. Induction of altered hepatic foci by a mixture of dioxin-like compounds with and without 2,2',4,4',5,5'-hexachlorobiphenyl in female Sprague-Dawley rats. *Toxicol Appl Pharmacol* 156:30-39.

*van Raaij JAGM, Frijters CMG, Van Den Berg KJ. 1993. Hexachlorobenzene-induced hypothyroidism: Involvement of different mechanisms by parent compound and metabolite. *Biochem Pharmacol* 46(8):1385-1391.

Vaz R. 1995. Average Swedish dietary intakes of organochlorine contaminants via foods of animal origin and their relation to levels in human milk, 1975-90. *Food Addit Contam* 12(4):543-558.

Vaz R, Slorach SA, Hofvander Y. 1993. Organochlorine contaminants in Swedish human milk: studies conducted at the National Food Administration 1981-1990. *Food Addit Contam* 10(4):407-418.

*Vena JE, Buck GM, Kostyniak P, et al. 1996. The New York angler cohort study: Exposure characterization and reproductive and developmental health. *Toxicol Ind Health* 12:327-334.

Verhallen EY, Van Den Berg M, Bosveld ATC. 1997. Interactive effects on the EROD-inducing potency of polyhalogenated aromatic hydrocarbons in the chicken embryo hepatocyte assay. *Environ Toxicol Chem* 16(2):277-282.

*Verschueren HG, Kroes R, Den Tonkelaar EM, et al. 1976. Toxicity of methylmercury chloride in rats. III. Long-term toxicity study. *Toxicology* 6:107-123.

Villeneuve DC, Valli VE, Norstrom RJ, et al. 1981. Toxicological response of rats fed Lake Ontario or Pacific coho salmon for 28 days. *J Environ Sci Health B* 16(6):649-689.

*Viluksela M, Stahl BU, Birnbaum LS, et al. 1998a. Subchronic/chronic toxicity of a mixture of four chlorinated dibenzo-*p*-dioxins in rats. I. Design, general observations, hematology, and liver concentrations. *Toxicol Appl Pharmacol* 151:57-69.

*Viluksela M, Stahl BU, Birnbaum LS, et al. 1998b. Subchronic/chronic toxicity of a mixture of four chlorinated dibenzo-*p*-dioxins in rats. II. Biochemical effects. *Toxicol Appl Pharmacol* 151:70-78.

Voie OA, Wiik P, Fonnum F. 1998. *Ortho*-substituted polychlorinated biphenyls activate respiratory burst measured as luminol-amplified chemoluminescence in human granulocytes. *Toxicol Appl Pharmacol* 150:369-375.

*Vonier PM, Crain DA, McLachlan JA, et al. 1996. Interaction of environmental chemicals with the estrogen and progesterone receptors from the oviduct of the American alligator. *Environ Health Perspect* 104(12):1318-1322.

*Vos JG. 1986. Immunotoxicity of hexachlorobenzene. In: Morris CR, Cabral JRP, eds. *Hexachlorobenzene: Proceedings of an international symposium*. Lyon, France: International Agency for Research on Cancer, 347-356.

Vos RME, Snoek MC, Van Berkel WJH, et al. 1988. Differential induction of rat hepatic glutathione *s*-transferase isoenzymes by hexachlorobenzene and benzyl isothiocyanate: Comparison with induction by phenobarbital and 3-methylcholanthrene. *Biochem Pharmacol* 37(6):1077-1082.

Vrecl M, Jan J, Pogacnik A, et al. 1996. Transfer of planar and non-planar chlorobiphenyls, 4,4'-DDE and hexachlorobenzene from blood to milk and to suckling infants. *Chemosphere* 33(11):2341-2346.

Walker MK, Peterson RE. 1991. Potencies of polychlorinated dibenzo-*p*-dioxin, dibenzofuran, and biphenyl congeners, relative to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin, for producing early life stage mortality in rainbow trout (*Oncorhynchus mykiss*). *Aquat Toxicol* 21:219-238.

Walker MK, Cook PM, Butterworth BC, et al. 1996. Potency of a complex mixture of polychlorinated dibenzo-*p*-dioxin, dibenzofuran, and biphenyl congeners compared to 2,3,7,8-tetrachlorodibenzo-*p*-dioxin in causing fish early life stage mortality. *Fundam Appl Toxicol* 30:178-186.

Weber H, Harris MW, Haseman JK, et al. 1985. Teratogenic potency of TCDD and TCDD-TCDF combinations in C57BL/6N mice. *Toxicol Lett* 26:159-167.

Weber LWD, Lebofsky M, Stahl BU, et al. 1992a. Comparative toxicity of four chlorinated dibenzo-*p*-dioxins (CDDs) and their mixture: Part II: Structure-activity relationships with inhibition of hepatic phosphoenolpyruvate carboxykinase, pyruvate carboxylase, and γ -glutamyl transpeptidase activities. *Arch Toxicol* 66:478-483.

Weber LWD, Lebofsky M, Stahl BU, et al. 1992b. Comparative toxicity of four chlorinated dibenzo-*p*-dioxins (CDDs) and their mixture: Part III: Structure-activity relationship with increased plasma tryptophan levels, but no relationship to hepatic ethoxyresorufin *o*-deethylase activity. *Arch Toxicol* 66:484-488.

*Weber LWD, Lebofsky M, Stahl BU, et al. 1995. Correlation between toxicity and effects on intermediary metabolism in 2,3,7,8-tetrachlorodibenzo-*p*-dioxin-treated male C257BL/6J and DBA/2J mice. *Toxicol Appl Pharmacol* 131:155-162.

Weinand-Härer A, Lilienthal H, Bucholski K-A, et al. 1997. Behavioral effects of maternal exposure to an *ortho*-chlorinated or a coplanar PCB congener in rats. *Environ Toxicol Pharmacol* 3:97-103.

Weisenberg E. 1986. Hexachlorobenzene in human milk: A polyhalogenated risk. In: Morris CP, Cabral JRP, ed. Hexachlorobenzene: Proceedings of an international symposium. Lyon: International Agency for Research on Cancer,, 193-200.

Weisglas-Kuperus N. 1996. Neurodevelopmental, immunological and endocrinological indices of perinatal human exposure to PCBs and dioxins. *Neurotoxicology* 17(3-4):945-946.

Weisglas-Kuperus N. 1998. Neurodevelopmental, immunological and endocrinological indices of perinatal human exposure to PCBs and dioxins. *Chemosphere* 37(9-12):1845-1853.

*Weisglas-Kuperus N, Sas TCJ, Koopman-Esseboom C, et al. 1995. Immunologic effects of background prenatal and postnatal exposure to dioxins and polychlorinated biphenyls in Dutch infants. *Pediatr Res* 38:404-410.

*Welsch F. 1985. Effects of acute or chronic polychlorinated biphenyl ingestion on maternal metabolic homeostasis and on the manifestations of embryotoxicity caused by cyclophosphamide in mice. *Arch Toxicol* 57:104-113.

- Weubabd-Harer A, Lilienthal H, Hany J, et al. 1997. Single or combined maternal exposure to a coplanar and an ortho-chlorinated PCB congener in rats: Impairments of learning in the adult male offspring. *Neurotoxicology* 18(3):905-906.
- Wildhaber ML, Schmitt CJ. 1996. Estimating aquatic toxicity as determined through laboratory tests of Great Lakes sediments containing complex mixtures of environmental contaminants. *Environ Monit Assess* 41:255-289.
- Wolff MS, Toniolo PG. 1995. Environmental organochlorine exposure as a potential etiologic factor in breast cancer. *Environ Health Perspect Suppl* 103(7):141-145.
- *Wolfle D. 1998. Interactions between 2,3,7,8-TCDD and PCBs as tumor promoters: Limitations of TEFs. *Teratogen Carcinog Mutagen* 17:217-224.
- *Wong PW, Pessah IN. 1996. *Ortho*-substituted polychlorinated biphenyls alter calcium regulation by a ryanodine receptor-mediated mechanism: Structural specificity toward skeletal- and cardiac-type microsomal calcium release channels. *Mol Pharmacol* 49:740-751.
- *Wong PW, Pessah IN. 1997. Noncoplanar PCB 95 alters microsomal calcium transport by an immunophilin FKBP 12-dependent mechanism. *Mol Pharmacol* 51:693-702.
- *Wong PW, Joy RM, Albertson TE, et al. 1997. *Ortho*-substituted 2,2',3,5',6-pentachlorobiphenyl (PCB 95) alters rat hippocampal ryanodine receptors and neuroplasticity *in vitro*: Evidence for altered hippocampal function. *Neurotoxicology* 18(2):443-456.
- Worobey J, Thomas DA, Lewis M. 1990. Breastmilk contaminants and infant behavior. *FASEB J* 4(3):A672.
- *Wren CD, Hunter DB, Leatherland JF, et al. 1987a. The effects of polychlorinated biphenyls and methylmercury, singly and in combination, on mink. I: Uptake and toxic responses. *Arch Environ Contam Toxicol* 16:441-447.
- *Wren CD, Hunter DB, Leatherland JF, et al. 1987b. The effects of polychlorinated biphenyls and methylmercury, singly and in combination on mink. II: Reproduction and kit development. *Arch Environ Contam Toxicol* 16:449-454.
- Zabel EW, Cook PM, Peterson RE. 1995a. Potency of 3,3',4,4',5-pentachlorobiphenyl (PCB 126), alone and in combination with 2,3,7,8-tetrachlorodibenzo-*p*-dioxin (TCDD), to produce lake trout early life-stage mortality. *Environ Toxicol Chem* 14(12):2175-2179.
- Zabel EW, Walker MK, Hornung MW, et al. 1993. Interactions of polychlorinated dibenzo-*p*-dioxin and biphenyl congeners in producing rainbow trout early life stage mortality. *Toxicologist* 13(1):195.
- Zabel EW, Walker MK, Hornung MW, et al. 1995b. Interactions of polychlorinated dibenzo-*p*-dioxin, dibenzofuran, and biphenyl congeners for producing rainbow trout early life stage mortality. *Toxicol Appl Pharmacol* 134:204-213.
- Zhao F, Mayura K, Harper N, et al. 1997a. Inhibition of 3,3',4,4',5-pentachlorobiphenyl-induced fetal cleft palate and immunotoxicity in C57BL/6 mice by 2,2',4,4',5,5'-hexachlorobiphenyl. *Chemosphere* 34(5-7):1605-1613.

Zhao F, Mayura K, Kocurek N, et al. 1997b. Inhibition of 3,3',4,4',5-pentachlorobiphenyl-induced chicken embryotoxicity by 2,2',4,4',5,5'-hexachlorobiphenyl. *Fundam Appl Toxicol* 35:1-8.

Zhao F, Mayura K, Safe S, et al. 1995. 2,2',4,4',5,5'-Hexachlorobiphenyl as an antagonist of the teratogenicity of 3,3',4,4',5-pentachlorobiphenyl in C57BL/6 mice. *Toxicologist* 15(1):157.

*Zoeller RT, Dowling ALS, Vas AA. 2000. Developmental exposure to polychlorinated biphenyls exerts thyroid hormone-like effects on the expression of RC3/neurogranin and myelin basic protein messenger ribonucleic acids in the developing rat brain. *Endocrinology* 141(1):181-189.